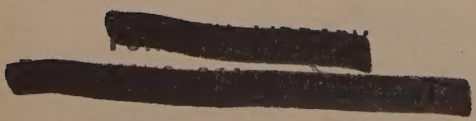


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TO THE COMMISSIONER OF THE GENERAL LAND OFFICE

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WITHDRAWN

SAMUEL JOHNSON

PRESIDENT OF KING'S COLLEGE

HIS CAREER AND WRITINGS

VOLUME II

THE PHILOSOPHER

AMS PRESS

NEW YORK

M. S.

SAMUELIS JOHNSON, D. D.

COLLEGII REGALIS, NOVI-EBORACI,

PRÆSIDIS primi,

Et hujus ECCLESIAE nuper RECTORIS.

Natus Die 14.^{to} OCTOB. 1696,

Obiit 6.^{to} JAN. 1772.

IF decent Dignity, and modest Mien,
The cheerful Heart, and Countenance serene;
If pure RELIGION, and unfulled TRUTH,
His Age's Solace, and his Search in Youth;
If PIETY, in all the Paths he trod,
Still rising vigorous to his LORD and GOD;
If CHARITY, thro' all the Race he ran,
Still wishing well, and doing Good, to MAN;
If LEARNING, free from Pedantry and Pride,-
If FAITH and VIRTUE, walking Side by Side;
If well to mark his Being's Aim and End,-
To shine, thro' Life, a HUSBAND, FATHER, FRIEND;-
If THESE Ambition in thy Soul can raise,
Excite thy Reverence, or demand thy Praise;
READER,----ere yet Thou quit this earthly Scene,
Revere his Name, and be what HE has been.

MYLES COOPER.

SAMUEL JOHNSON'S EPITAPH

Composed by Myles Cooper, his successor as President of King's College. This is the form in which the epitaph appears on Johnson's tombstone in the cemetery of Christ Church, Stratford, Connecticut. In its original version it contained two additional lines (see Vol. I, pp. 53 and 487-88).

SAMUEL JOHNSON

PRESIDENT OF KING'S COLLEGE

HIS CAREER AND WRITINGS

EDITED BY

HERBERT AND CAROL SCHNEIDER

WITH A FOREWORD BY

NICHOLAS MURRAY BUTLER

VOLUME II

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PREFACE TO VOLUME TWO

Samuel Johnson's *Elementa Philosophica*, which is here republished, has been of interest to students of the history of American thought and education, not merely because it was the first textbook in philosophy published in this country, but also because of its intimate relation to the philosophy of Bishop Berkeley. The setting which it is given in this volume ought to make it interesting in still another respect, for it is possible here to see it against its American background. It marks, on the one hand, an attempted revolt against the garbled and antiquated mixture of scholastic Platonism and Calvinistic theology which was still current in New-England about 1700; and on the other, it marks a radical defense of revealed religion against the growing attacks of the Deists and free-thinkers. It is at once an attack and a retreat. The early Latin treatises of the Samuel Johnson of Yale College are therefore significant in that they reveal the philosophical system and mental habits from which he never quite freed himself, though he imagined he had made a fresh start with "the new learning." Quite apart from the *Elementa Philosophica*, however, these treatises are significant because of the light they shed on the backward state of learning and education in the American Colonies.

Selections from the various revisions of Johnson's *Encyclopedia*, which finally grew to the *Elementa Philosophica*, are published here not merely to show the evolution of the treatise, but to indicate his predominant passion for a scheme of classification or academic system of all the "parts of learning."

Of the correspondence with Berkeley and Cadwallader Colden little need be said here, since students of American philosophy are familiar with most of it. It is here completely assembled for the first time. It is especially of interest for the interpretation of Berkeley's philosophy in that it throws Newton, rather than Locke, into the foreground of the controversy.

The *Raphael* is practically unknown, having existed only in manuscript form, but it is certainly an important as well as an enter-

taining document. The reader who is interested in Johnson's philosophy should also consult some of the material in Volume Three, especially the letter of *Aristocles to Authades* and several of the more philosophical sermons.

THE EDITORS

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INTRODUCTION

THE MIND OF SAMUEL JOHNSON

By

Herbert Wallace Schneider

THE MIND OF SAMUEL JOHNSON

Imagine yourself seated in the Old South Church of Boston on a Sunday about the year 1724, listening to the pastor, the Reverend Mr. Samuel Willard, Vice-President of Harvard College, while he preaches one of his two hundred and fifty "expository lectures on the Assembly's Shorter Catechism." You are surrounded by a congregation of very dignified and prosperous Bostonians, the self-styled "elect." They acknowledge no superiors on earth, for even the King of England, though he is formally and distantly acknowledged by them as their sovereign, is not their superior either in their own eyes or in the sight of their real ruler, the Lord of Heaven and Earth. To these favored few of the Lord, the Reverend Mr. Willard is expounding the first question of the Catechism, which is, I suppose, the first question absolutely — "What is the chief end of man?"

Answer: Man's chief end is to glorify God, and enjoy Him forever . . .

If we could speak exactly there is but *one* of these, *viz.*, to glorify God, which is man's chief end; the other is immediately subordinated . . . it is man's duty to seek his own best good, which consists in enjoying of God; but he is to do it in and for the glory of God . . .

. . . the object of man's happiness is out of himself. Man cannot be his own felicity. He is a dependent creature; his being and his blessedness are two things. He cannot dwell at home. He doth not enjoy in himself a self-sufficiency . . . Neither can the body or soul be at rest, till they meet with and fall upon an object that may give them satisfaction. This is it that hath made the whole world a company of seekers asking for God.

The whole creation affords no such object, the fruition whereof can make a man happy . . . There are three defects in the creature, rendering it insufficient for our perfect well-being. (1) Its unsuitableness. If there were enough of it, yet it is not accommodated to all a man's wants; nay, those which are his greatest wants and make him truly miserable . . . (2) Its scantiness. Were it never so suitable, yet there is not enough of it. The reaches of a man's soul are so vast, that they can grasp in the whole creation and scarce feel it. The desire of man, that horse-leech's daughter, is still crying Give, Give. The bed is too narrow, and the covering too short. The world looks bulky but it is empty, void and waste. Many have

had too much, but never yet any had enough . . . (3) Its short continuance and uncertainty. Man is a creature made for perpetuity, and if his object be not stable, and durable, it will sooner or later leave him under horrible disappointment, and so will these things. They are broken cisterns. They are certain in nothing but uncertainty . . . How then can they make a man happy?

God, and He only, is such an object, in the enjoyment of whom, there is perfect satisfaction and blessedness . . . Every action in a man's life that doth not serve to this great end is a vain action . . . There are but a few that know what they were made for . . . The greatest number of the children of men live in vain.¹

Unless you are exceptionally irresponsive, the boundless imagination and occasional eloquence of the preacher has touched you. Your soul expands until it "can grasp the whole creation and scarcely feel it." The world looks "empty, void and waste," full of "horrible disappointments" and "broken cisterns." You turn from it and seek your own best good and enjoyment in the glory of God in whom you "dwell at home." But now church is out, and you are plunged into the heart of Boston, the metropolis of New England, growing, enterprising, exciting, absorbing. It is not empty, void or waste. God Himself must find his own "best good" and enjoyment in dwelling at home in Boston!

Some such intellectual somersault every Bostonian performed every Sunday, and though an apparently difficult feat, it was soon performed with great facility. No habit, in fact, is more easily formed than this, of divorcing the world of imagination from the world of action. It is an easy way out of a serious predicament. Both body and conscience are satisfied, and neither at the expense of the other. On Sunday the puritan as whole-heartedly lost himself in God, as on Monday he devoted himself to business. The infinite cravings of his conscience, could feed on the infinite glory of God, while that other "horse-leech's daughter," the desires of the body, could feast on the abundant wealth of the Atlantic Ocean and the virgin forests and fields of a new continent. Even Edwards boasted that he was the humblest man in New Eng-

¹ Samuel Willard, *A Compleat Body of Divinity, in 250 expository lectures on the Assembly's Shorter Catechism, wherein the doctrines of the Christian religion are unfolded, their truth confirmed, their excellence displayed, their usefulness improved; contrary errors and vices refuted and exposed, objections answered, controversies settled, cases of conscience resolved and a great light thereby reflected on the present age*, Boston, 1726.

land. The underlying pride and prosperity could not be suppressed. The puritan's philosophical emphasis on human depravity was merely the reverse side of his intellectual complacency.

One of the first men to discover this was Samuel Johnson. He was the son of a deacon of the Congregational Church at Guilford, Connecticut. What little schooling he could acquire in this pioneer community was given him by his grandfather, and by the ministers in the neighboring towns, several of whom were, even in the eyes of this ten-year-old lad, "such wretched poor scholars, that they could teach him little or nothing."²

The condition of learning (as well as everything else) was very low in these times, indeed much lower than in the earlier time while those yet lived who had had their education in England and first settled the country. These were now gone off the stage and their sons fell greatly short of their acquirements as through the necessity of the times they could give but little attention to the business of education . . . It was nothing but the scholastic cobwebs of a few little English and Dutch systems that would hardly now be taken up in the street, some of Ramus and Alstad's Works was considered as the highest attainments. They heard indeed in 1714, when he [Johnson] took his Bachelor's Degree of a new philosophy that of late was all in vogue and of such names as Descartes, Boyle, Locke, and Newton, but they were cautioned against thinking anything of them because the new philosophy, it was said, would soon bring in a new divinity and corrupt the pure religion of the country, and they were not allowed to vary an ace in their thoughts from Dr. Ames' *Medulla Theologiae* and *Cases of Conscience* and Wollebius, which were the only systems of divinity that were thumbed in those days and considered with equal if not greater veneration than the Bible itself for the contrivance of those and the like scholastical authors to make curious systems in a scientific way out of their own heads, and under each head to pick up a few texts of Scripture which seemed to sound favorably and accommodate them to their preconceived schemes. Indeed there was no such thing as any book of learning to be had in those times under a 100 or 150 years old, such as the first settlers of the country brought with them 70 or 80 years before and some few used to make synopses or abridgements of these old scholastic systems.³

Several of Samuel Johnson's college notebooks have survived. They give a startling picture of the intellectual horizons and educational methods in the college, which was then being established, and which later bore the name of Yale. In a little volume written

² *Autobiography*. In Vol. I, p. 4.

³ *Autobiography*. In Vol. I, pp. 5, 6.

in what was supposed to be Latin, and dedicated to *dignissimo, clarissimo, doctissimo, spectatissimo viro Magistro Phinea Fisk*, he made a systematic summary of "all learning."⁴ It is entitled *Technologia sive Technometria; Ars Encyclopaidia manualis ceu philosophia. Editio quarto longe correctior. Anno a Christo pro nobis incarnato 1714 et a mundo per numen creato 5663*. It consists of about 1200 "theses," each containing a definition or a classification. The terminology is highly technical and almost impossible to translate into intelligible English; but a glance at this treatise is sufficient to reveal its scholastic methods and categories as well as its preoccupation with purely formal distinctions. Most antiquated of all are the Aristotelian physics and the Ptolemaic astronomy.⁵

This "curious cobweb of distributions and definitions," he says, "only served to blow him up with a great conceit that he was now an adept, and in this pleasing imagination he continued a year or two, till accidentally lighting on Lord Bacon's *Instauratio Magna*, or *Advancement of Learning* (perhaps the only copy in the country, and nobody knew its value), he immediately bought it and greedily fell to studying it."

About this time, 1714, when he was turned of 18, came over from England a well-chosen library of new books collected by Mr. Dummer, agent for the Colony. He had then all at once the vast pleasure of reading the works of our best English poets, philosophers, and divines, Shakespeare and Milton, etc., and Norris, etc., Boyle and Newton, etc., Patrick and Whitby, Barrow, Tillotson, South, Sharp, Scot and Sherlock, etc. All this was like a flood of day to his low state of mind.⁶

The effect was truly revolutionary. His next notebook, which served to guide his teaching as well as his further studies, is a remarkable contrast. It is written in English, and though still in the form of a cyclopaedia of learning, it is not preoccupied with formal distinctions, but with new subject matter. It is still replete with scholastic categories and with the Platonism of the puritan schoolmen, but its general temper and aim are radically different. Bacon's influence on him was primarily to shake him loose from his formalism and conceit, to kindle his imagination and to give him a glimpse of the enormous reaches of human ignorance and

⁴ Published below, with a translation, pp. 55-186.

⁵ See below, pp. 136-157.

⁶ *Autobiography*. In Vol. I, p. 7.

the possibilities of the "advancement of learning." The following subtitle of his new encyclopaedia⁷ is certainly Baconian in spirit: "These are the System of Travails of the Human Intellect in the Microcosm and in the Macrocosm." The content, however, of his philosophy was largely derived, not from Bacon, but from Locke and his contemporaries. His new classification of the sciences suggests that of Locke at the end of his *Essay*, and both the *Logic*⁸ and the new encyclopaedia are conceived in Lockian terms. Formal logic is almost entirely abandoned, and his attention is centered on the problems of guiding the process of thinking and improving its quality.

As for Newton and natural philosophy, Johnson soon discovered that he needed calculus to understand them at all. Accordingly he studied higher mathematics by himself and learned the rudiments of modern physical science, which he immediately substituted for the Aristotelian physics and Ptolemaic astronomy. All this took place during the few years he remained at Yale as tutor. He immediately introduced the new learning into the curriculum. It was probably through him that his pupil, Jonathan Edwards, came in contact with Locke. Johnson even began to talk about "natural" religion and enjoyed reading the milder Deists, such as Locke and Wollaston.

In the meantime there was continual trouble at the college. Financial difficulties, local jealousies, and several other factors disrupted the school. One of these factors was Johnson himself. The students complained that he was "too poor a scholar" to teach them, and he was so unpopular, whatever the real reasons may have been, that in 1720 he was practically forced to resign.⁹ He became the pastor of a small congregation at West Haven, near enough to the school so that he could continue his studies.

However, during these years, 1714 to 1720, he had not only discovered the "new learning" but also the Anglican Church, for among the books in the Dummer library were many by Anglican divines. By these ecclesiastics he was not only made conscious of the doubtful validity of his Congregational ordination, but also introduced to a rich and scholarly tradition of which he had been

⁷ *Some General Speculations, Being an Introduction unto Sophia or Philosophy*. See below, pp. 201-216.

⁸ Published below, pp. 217-244.

⁹ See F. B. Dexter, *Documentary History of Yale University*, 1916.

quite ignorant. He learned something of the wealth of poetry and literature which England had produced during the seventeenth century, of which he had hitherto not the faintest notion.

In short, Johnson made the discovery that New England was really not the center of God's Kingdom on Earth, but rather merely one of the outlying provinces of the British Empire. He was shocked at the intellectual backwardness of his colony; he was disgusted with the controversial temper and lack of order among the Congregational churches. On all sides he seemed to see evidences of provincialism, intellectual poverty, and in general a lack of civilization. In 1722 he and a few friends, after years of hesitation and deliberation, finally resolved to take orders in the Anglican church. And when Johnson discovered the glories of London, the learning of Oxford, and the dignity of the episcopal hierarchy; when, in other words, he became sensible of the values of civilization, or what in New England was known as "worldliness," his puritan prejudices quickly subsided. He became an Englishman, and a gentleman. From that time he looked upon America as a mission field; not, of course, in the crude way in which the Society for the Propagation of the Gospel in Foreign Parts, whose missionary he now became, looked at it—not as a land of heathen natives, but as a frontier settlement, crude, uncouth, ungoverned, dependent for salvation upon a mother country and her mature institutions.

To read his own account of this crisis gives one the impression that the real issue at stake was whether or not the Christians of the "purest age," the first century, had bishops. For years this question was argued back and forth by him and his friends, before they finally decided to break with the Congregational system, and for years they read church histories, sermons and debates on the primitive and true form of church government. But to mistake the theoretical form and technical questions of this action for its real motives would be as trivial as to mistake the propaganda of a war for a discussion of its causes. It is quite easy to read between the lines of Johnson's account what was actually going on in his mind, and occasionally he is even explicit, conscious that a whole philosophy is involved. For example, in his diary, he gives among his reasons for his decision, that

This country is in such a miserable state as to church government (let

whatever hypothesis will, be right) that it needs reformation and alteration in that affair.

There may be more souls damnified for want of episcopal government in the country and that by far at length, than by my making this appearance [of rebellion].¹⁰

Other factors which influenced him can readily be gleaned from his autobiography and letters. He disliked the wave of evangelistic "enthusiasm" which was at that time sweeping the puritan churches. He noticed when at college its "great tendency to promote and nourish self conceit and spiritual pride. The scholars had private meetings for prayer and reading and such as had something of a knack that way could not forbear appearing vain of it; one especially who excelled at it was even so vain as to talk of his gifts; on the other hand some modest youths of good sense who wanted assurances to pray offhand at any rate, were apt to be despised and discouraged."¹¹ And later, during the Great Awakening, engineered by Whitefield, Edwards, and their followers, he became incensed at the way in which these leaders "broke through all order and rule" and "strolled about from place to place" followed by "a numerous fry of lay exhorters, propagating the most horrid notions both of God and the Gospel that could enter into the heart of man. The way of these teachers and exhorters was in the most affecting tones to say all the most frightful things they could think of about the devil, hell and damnation, so as to scare people almost out of their wits, in order to bring them to what they called conversion; several went quite distracted, so that their night meetings (in several of which Mr. Johnson was present *incog.*) looked like a very hell upon earth; some sighing, some groaning, some screeching and wringing their hands, the minister all the while, like a fiend, tormenting them till they would come to Christ; while others who conceited they were converted, were all in the greatest raptures and transports, triumphing and singing psalms and hallelujahs and some fell into trances and saw Christ and angels, and who were saved, and who were damned; and others censuring and calling all to nought for the vilest Pharisees and hypocrites those who were not converted in their way, pretending they could see hell and the devil in their faces, etc. etc.

¹⁰ Vol. I, pp. 63-64.

¹¹ *Autobiography*. In Vol. I, p. 11. See also letters dated March 1, 1759 (I, 282), and Sept. 20, 1764 (I, 345).

Such hideous doings as these threw the country into the greatest confusion imaginable and occasioned endless divisions and separations, so that many could find no rest to the sole of their feet till they retired into the Church as their only ark of safety."¹²

He had also an early dislike to the independent or congregational form of church government, in which every brother has a hand; which as well as the extempore way he plainly saw tended too much to conceit and self-sufficiency and to endless feuds, censoriousness and uncharitableness while the discipline was often on mere human frailties and made a means to revenge little private quarrels and issued in great animosities and often in virulent separations. He was convinced that a way so entirely popular could but very poorly and he thought not long subsist to answer any ends of government; but must from the nature of it crumble to pieces, as every individual seemed to think himself infallible.¹³

To Benjamin Franklin he wrote years later:

. . . Would to God you were charged with pleading the same cause in behalf of all the governments that they might all alike be taken into the King's more immediate protection. It would certainly be best for us all to be under one form of government, and I beg that your best influence may be so directed, that the government at home when they take yours in hand may make but one work of it. I wish to Heaven, particularly in behalf of this, that that might be the happy event, for we greatly suffer for want of such a change, particularly by our whole Assembly's being the judges in all cases of equity, and our Constitution's being so monstrously popular that all our judges and other officers depend entirely on the people, so that they are under the strongest temptation in many cases to consider not so much what is law or equity, as what may please their constituents.¹⁴

And to the Archbishop of Canterbury he complained about such loose thinkers as Mayhew, who can scarcely be accounted better Christians than the Turks, or such furious bitter Calvinistical enthusiasts as are really no more friends to monarchy than episcopacy; and against people of both these sorts episcopacy is really necessary towards the better securing our dependence, as well as many other good political purposes.¹⁵

These and many similar passages in his writings make it quite

¹² *Autobiography*. In Vol. I, p. 28.

¹³ *Autobiography*. In Vol. I, p. 12.

¹⁴ Vol. I, p. 349.

¹⁵ Vol. I, p. 346. Other statements of his aversion to democracy and independence may be found in the following letters: April 14, 1751 (I, 145) and July 12, 1760 (I, 293).

evident that Samuel Johnson was thoroughly disillusioned about the whole puritan philosophy, its spiritual pride, its indecent enthusiasm, its Calvinism, its democracy and anarchy. In the Anglican church he found an ark of refuge; he found leisure for study, law and order, "the beauty of holiness," urbanity. He returned to a civilized world, upon which the puritans had turned their backs. He had recovered a "worldly" sense of values, for he was willing to judge religion by its moral fruits, rather than to sacrifice morality to an unearthly ideal. His sense of sin had been transformed into a sense of ignorance, and his Yankee pride into a genuine piety.

Johnson had aimed to settle down to the peaceful life of a small parish, there to devote himself to his simple duties and above all to his favorite studies, but by the irony of fate he was doomed to add one more controversy to the long list of religious disputes which were harassing New England, and from which he himself had desired to escape. A public letter "To His Dissenting Parishioners" in defense of the Anglican church naturally called for replies and these for rejoinders. In the '40's, as a result of the Great Awakening and its emphasis on "mere sovereignty" and special grace, he was led into a protracted dispute with several Calvinists on this fundamental theological issue. He protested profusely that he disliked debate and adopted a very conciliatory and dignified manner, but this merely piqued his more frankly contentious antagonists. Jonathan Dickinson, one of the most violent of his Calvinist adversaries, died in the midst of the dispute, on which occasion Samuel Johnson remarked: "Me-thinks a man must be not a little out of countenance to find himself in this disputatious temper translated into the calm and peaceable regions of the blessed. I could wish he might have had opportunity to cool after so great a part of his life spent in wrangling against the Church in one shape or other, and that, as far as I could ever see, without any just argument or fair reasoning."¹⁶ This bit of sarcasm was strong language for Johnson, but it was as nothing compared with the abuse and *ad hominem* tactics of his opponents. Johnson probably had the better of the argument, but then he had no Jonathan Edwards as his opponent, for whom

¹⁶ Preface to *A Second Vindication of God's Sovereign Free Grace Indeed*. In Vol. III, Part IV.

Johnson would hardly have been a match. Johnson, in fact, insisted on several of the distinctions which Edwards was at that very time developing into his *Essay on the Will*. He admitted that God was not responsible for everything He foreknew (or, strictly speaking, *knew*, since in God time is transcended); and he admitted that "in the distribution of talents and favors in this state of probation, the sovereignty of God as a benefactor does truly take place; but in the future distributions of rewards and punishments, absolute sovereignty is entirely out of the question. . . . As a judge deciding the eternal condition of men, God never once represents Himself as arbitrary, but everywhere, as proceeding according to equity, *without respect of persons*; not treating men according to any absolute disposition He hath already made, but in exact proportion to their own conduct in the use of the talents committed to their trust."¹⁷ This *use* to which a man puts his talents and his circumstances is a matter of his free will and is not necessitated by a particular decree of either God or fate. To God, of course, all things are neither necessary nor contingent, they are *certain* and known, but to us there is a difference between necessary and contingent events.¹⁸

But Johnson's assumption that we have an intuitive knowledge of our freedom was naturally questioned, for he was arguing in view of those victims of the evangelists who actually *had* no sense of their freedom, and some of whom even had a horrible premonition of their predetermined damnation. In this predicament Johnson fell back on a pragmatic device, which reminds one of William James's tactics on essentially the same problem. He argued that "the right way of forming a just notion of God's decrees is to judge of them by the facts before our eyes. If therefore, it be a fact, that by the disposition which God hath already made, or by any necessitating influence of His on the one hand, or withholding it on the other, to each individual, the good are necessarily good and happy, and the bad are necessarily bad and miserable, God doubtless absolutely decreed it should be so."¹⁹ But Johnson soon dis-

¹⁷ *A Letter Concerning the Sovereignty and the Promises of God*. Vol. III, Part IV. The substance of this argument may be found in a letter to Samuel Browne, Jan. 1, 1738. Vol. III, Part III.

¹⁸ Cf. his *Letter to Mr. Jonathan Dickinson, in Defense of Aristocles to Authades, Concerning the Sovereignty and Promises of God*. Vol. III, Part IV.

¹⁹ *Ibid.* Vol. III, Part IV.

covered that as a question of fact, this was unanswerable, for no one can either prove or disprove that a man *must be* what he is. Empirically all we know is that the process of being saved is one of degrees. Men are more or less saved. "Is there no medium between an obstinate relentless sinner, and one that is thoroughly regenerate? . . . May not one who is not yet thus entirely devoted to God, be brought by the assistance of Common Grace, to be serious and really solicitous for salvation, so as being deeply sensible of his own guilt and weakness, earnestly to cry to God for help and to strive in earnest that he may be qualified for God's help?"²⁰

In this way Johnson tried to escape the dilemma which the Calvinists had put up to him. They had argued that God's *promises* were merely "encouragements," but that, strictly speaking, they were superfluous, since He could not make promises to the unregenerate, for they wholly lacked redeeming grace, and He would not make promises to the regenerate, since they already possessed it. Johnson, by conceiving of regeneration as a process, not a fixed state, found room for an "encouraging," though not for an "invincible" grace. God promises to help those who are trying their own best. But to speak of salvation in these terms was equivalent to regarding its outward moral manifestations as its very essence, and no doubt he came dangerously near upsetting the whole philosophy of grace, just as the Calvinists came dangerously near upsetting the philosophy of promises. In reality, however, this was precisely Johnson's aim, though he would not admit it, in any radical form. The doctrine of "invincible" grace he regarded as demoralizing, and in order to give due weight to human responsibility for moral conduct, he fell back on man's free will or absolute agency. The distinction between physical and moral necessity, which Edwards made fundamental, Johnson regarded as irrelevant. It is true that a man is morally forced to "assent to self-evident truth," just as he is physically exposed to the force of gravity; but though man is passive in the face of both truth and gravity, he is nevertheless free in the realm of will and action.

Be my mind ever so much necessitated to assent to evident truth, I am nevertheless free to choose or refuse, to act or not to act, in consequence

²⁰ *A Letter Concerning the Sovereignty and Promises of God.* Vol. III, Part IV.

of this assent; for action according to the frame of our nature, ever springs from a self asserting power.²¹

I must think there can scarcely be a more mischievous doctrine advanced among mankind than this necessitating doctrine; for it tends at once to destroy all religion and morality, and all civil and family government, and render them unmeaning and ridiculous things: for what signify all laws and rules of action, all motives taken from praise or blame, hope or fear, reward or punishment, while everything we do is under a fatal necessity, and we can do no otherwise than we do. Let a child, a servant, or a subject be but possessed with this principle, that he can do no otherwise than he does, and in vain do you attempt to persuade him to do better, and it must be the greatest injustice to punish him for doing worse.²²

With this *ad hominem* appeal he closes his argument, and though it is dialectically feeble, it at least represents the underlying moral motives which repelled him from the Calvinistic doctrine; and in view of the hysteric and fanatic consequences of the doctrine in the hands of the evangelists, he felt himself empirically quite justified, whatever his dialectic may have proved or failed to prove.

It was for similar reasons that he welcomed Berkeley's²³ idealism. In his early enlightenment, it may be remembered, Johnson was very receptive to the ideas of Locke, Newton, and the milder Deists. The admirable harmony and laws of nature which they emphasized delighted him as being reason's witness to God. It never occurred to him that there was the least conflict between the latest science of nature and the oldest truths of revelation. But when Dean Berkeley, who spent two and a half years in Rhode Island, and whom Johnson naturally visited because of their close ecclesiastical affiliation, began to tell him of the direction in which Newton's philosophy was leading, of how Collins, starting from the deistic position, had proved the doctrine of fate and the impossibility of the existence of God; and when Samuel Johnson discovered the deterministic implications of Locke and the tendency toward "freethinking" in Wollaston, Shaftesbury and others, he became alarmed and gave a ready ear to Berkeley's attack on Newton.

Berkeley's radical attack on matter worried Johnson a little at

²¹ *A Second Vindication of God's Sovereign Free Grace Indeed*. Vol. III, Part IV.

²² *Letter to Mr. Jonathan Dickinson In Defense of Aristocles to Authades, concerning the Sovereignty and Promises of God*. Vol. III, Part IV.

²³ See his correspondence with Berkeley, republished below, pp. 261-284.

first, but when he discovered that Newton's laws of motion, and in general the physical sciences, were as valid as ever, that Berkeley was merely removing the mechanical *substances* of matter and space together with all mechanical or secondary causes, and that spirits were proved to be the only operating agents, Johnson was delighted with the philosophy.

What he emphasized first of all was that *resistance*, a quality which Newton had attributed to the operation of the *vis inertiae* of matter, was here proved to be a direct operation of God upon the mind of man. Strictly speaking, and he insisted vigorously on this point in his correspondence with Cadwallader Colden,²⁴ inertia is no *vis* or power at all. Matter is inertia, purely passive; it must be moved by something extraneous to it. In this sense matter was pragmatically identical with the ideas in the divine mind, which exist external to our own minds, but which have no power. They imply as their necessary correlative an active principle, mind, will or spirit.

This spirit is more than a name for the act of perceiving. For in the act of perceiving, a human mind is really passive, it merely receives what God, the active mind, impresses upon it. Likewise in intuiting self-evident truths, which must also come from God though not by the external senses, a human mind is intellectually "compelled" to see the truth. Berkeley's emphasis on *percipere* as the *esse* of a spirit worried Johnson not a little, for in that case, what happens when the soul ceases perceiving? How can it be immortal? Does it coalesce with the divine mind, just as when we fall asleep our ideas have an external and stable existence in the divine mind? If so, what becomes of human freedom? We have escaped physical fatalism merely to fall into the clutches of Calvinistic determinism. Berkeley accordingly admitted, and Johnson emphasized, the ultimate and indefeasible existence of finite minds as free active powers, in essence as free as God, though in practice limited by God's willingness to communicate Himself both in nature and in thought. Each person is therefore responsible for his acts — God only for his ideas. God furnishes us with inert material or subject matter, but the use we put it to is in an absolute sense our own. This emphasis on free-will was developed by Johnson primarily to combat the Calvinists, and it is important to note that the idealism

²⁴ See below, pp. 285-305.

represented by Johnson and Berkeley was erected in direct opposition to that of Edwards. Edwards' was monistic and deterministic; Berkeley's was pluralistic and "Arminian."

As time went on, however, Johnson became increasingly alarmed at the free-thinkers, and retreated considerably in a Calvinistic direction. In a sermon written as early as 1749, almost immediately after his disputes with the Calvinists, we find him emphasizing the "entire dependence of the creature on God" to such an extent that a Calvinist could ask for little more. After proving our utter dependence on the continual operation of God upon our minds for the facts of perception and the truths of reason, he speaks as follows:

The longer I live, the more abasing sense I have of my own weakness and insufficiency to my own happiness, and the more I must account it my greatest glory to depend on God and have recourse to Him upon all occasions and in all respects. Nay I must account it the greatest perfection and happiness of every intelligent creature to depend on a perpetual intercourse with the Deity for all his happiness and all his hopes. I know indeed that I have a self-exerting and self-determining principle, otherwise I could not blame myself if I determine or act amiss.

But after all when I find by sad experience how easily we are imposed on and how apt we are to be suddenly surprised and misled, and how weak we are of ourselves to bethink ourselves upon all occasions, to resist the force of appetites or withstand the force of sudden temptation, and how many and frequent the instances are wherein we are surprised into wrong compliances, in a word, when I seriously consider myself as being what I really am, and think of God as being what He really is, I am apt to say with holy Job, nor can I think of a more proper reflection that a creature can make with regard to his Almighty Creator, in whose hands are his life and breath, and whose are all his ways, *Lord, I have heard of Thee, by the hearing of the ear, but now my eye seeth Thee, wherefore I abhor myself and repent in dust and ashes.* Nor can I have a greater satisfaction within myself under a sense of my own weakness and impotence than that my soul can make her boast in the Lord, and rejoice to find that all her springs are in Him.²⁵

Here he saves enough of the *theory* of human freedom to allow for human responsibility, but to all intents and purposes he admits the dominant power and even the special providence of God, not only in controlling the outward circumstances of man, but even in

²⁵ *A Sermon on the Entire Dependence of the Creature upon God.* Vol. III, Part VI.

protecting him from his own passions. Though he remained an Arminian to the end, the general theme and temper of this sermon became increasingly prominent as he grew older and reflected his growing sense of conservatism, retreat and helplessness. He was forced into this attitude not merely by the growth of infidelity "in an apostatising age," but by his personal fortunes as well. Persecuted by the puritans at home, with only half-hearted support from the Society in England (because it feared that his chief aim, the establishment of an American episcopate, would dissolve the last bond between the colonies and the mother country); with the growth of "independent whiggism" in politics and philosophy, and with the military successes of the French against the colonies, the poor old Tory had good reason to fear that, unless God definitely intervened, not only his own cause would perish, but England and the colonies would fly to arms and the "House of Bourbon"²⁶ would pick up the remains. In vain he pleaded that the church could not prosper nor the colonies be saved as long as the candidates for orders were compelled to undertake the expensive and hazardous journey to London, on which one out of every five perished. When finally his own son, William, on whom he depended to continue his work (his elder son having turned to law), died of the small-pox in London after taking orders; and when two years later his wife died; and then his son-in-law, who was also one of the mainstays and trustees of the struggling college in New York; and when his second wife died of the small-pox, and he himself was forced to flee into seclusion because of the epidemic, and lived under a continual terror of the disease; when, under these circumstances, he was compelled to abandon his work at the college, with little to show for his labors; and when finally his remaining son, William Samuel, with whom he then made his home at Stratford, was sent to England and kept there for five years as agent for the colony, until the old Doctor began to fear the worst for him too, he was indeed entitled to feel "entirely dependent on God," and to be intensely conscious of man's helplessness. His chief comfort now, besides his general trust in a benevolent God,²⁷ was the idea that these were all signs of the approaching end of

²⁶ See his letter of March 7, 1769. Vol. I, p. 452.

²⁷ See his letters of Oct. 18, 1756 (I, 264) and Nov. 8, 1756 (I, 265). The death of his son marked a crisis in his intellectual, as well as in his personal career.

the world, and that it was his duty to reawaken a careless and "apostatizing age" to a sense of its sins, before God passed that cruel, irrevocable judgment upon it which it so justly deserved. Had he not been enabled thus to fall back on a sense of sin, it is difficult to see how he could have avoided despair.

In the face of these circumstances his intellectual energy is all the more remarkable. He fought a losing fight to the end, without compromise. It was customary among the philosophers of his day to do what he himself had done in his early days, to compromise with Deism and "the religion of nature" by employing reason as far as they could, and then depending on revelation for the rest. They proved by reason in one way or another, as Johnson himself did, in his *Elementa Philosophica*, the existence of God and the foundations of morality. But when it came to the doctrine of the Trinity, and the sacramental system, they called in the authority of the revealed word of God. Although there was here no open conflict between science and theology, few thorough-going thinkers could fail to see the general disparity between the two.

Johnson's reconciliation of the new science and the old theology was less superficial than most of the popular systems of the day, but it was evidently merely a reconciliation of two traditions which might at any time again prove incompatible. In Johnson's *Elementa Philosophica* ²⁸ the end of human life is defined not as the glory of God, but as happiness; and happiness, he says, is the complete realization of all the capacities of the soul. There is, first of all, happiness in this life and then, most important, since the soul is immortal, happiness in the life to come. It never occurred to Samuel Johnson that there was more than a verbal difference between this heavenly utilitarianism and the traditional conception of man's good consisting in the glory of God. For him as for the Calvinist, human happiness and the glory of God were identical. Nevertheless the fact that he thought it important to change the terminology has more than a verbal significance. It is a tribute to the growing emphasis on benevolence, in both human and divine character. The glory of the justice of God, which had impressed Edwards, was repulsive to Johnson, and only because he conceived of God as willing the eternal happiness of all human beings would he give God the glory. This was the real reason for his dissatisfaction with the

²⁸ See below, Part X.

philosophy of election and predestination. Johnson's God was a humane God. It was therefore no offense to the glory of God to be devoted to happiness even in this world. Man's obligation to seek the salvation of his soul was not for him, as it was for Edwards, the ultimate principle of conduct. This obligation was rather but a consequence of man's natural desire for happiness. Johnson, in brief, succeeded in shifting the basis of morals from the sense of sin to the desire for happiness. Though he came to the same practical conclusion as the Calvinist, and though pragmatically the difference seems verbal, it was really fundamental, for the idea of happiness, once admitted, worked like a leaven until less than a century later it had overturned the whole system to which Johnson had temporarily reconciled it. Johnson opened the door to human nature, and all that remained to be done was to cancel the eternal part of the soul and eternal happiness, in order to usher in a humanistic, worldly utilitarianism. At the time when Johnson took this step, he was conscious that he was dethroning the sense of sin, but he little dreamed that men would find happiness apart from God. But when he later witnessed the amazing growth of worldliness, of free-thinking, and of preoccupation with the problems of temporal happiness, he began to repent and prayed once more for an awakening of the sense of sin and of the vanity of worldliness. But it was too late, and Johnson himself had contributed largely to the mischief.²⁹

Berkeley, too, had felt the precarious position into which the new science had put the old theology, but he met it in a more radical way. By upsetting the whole framework of natural science and bringing it much closer to the principles of revelation, Berkeley had transformed nature into a constant succession of miraculous revelations of God to man. Though this spiritualism had much eased Johnson's mind, he was still philosophically nervous. For even in Berkeley's philosophy it was a far cry from the discoveries of reason to the doctrine of the trinity, the belief in angels and similar mysteries of the Christian tradition. Johnson was therefore

²⁹ The most interesting evidence of Johnson's increasing fear of natural religion is to be found in the revisions of his "System of Morality" when he embodied it into the *Elementa Philosophica*. These changes are indicated below (see Part X). On this general subject, see also letters dated Jan. 30, 1756; Feb. 19, 1756; May 25, 1756; Nov. 10, 1756; Dec. 10, 1756; Sept. 1757 (Mrs. Watts); July 12, 1760; Dec. 5, 1761; Apr. 10, 1762.

overjoyed when he discovered that a certain Thomas Hutchinson in England had proved the scientific value of the Bible. Let him tell of his enthusiasm himself:

Mr. Hutchinson's Scripture philosophy shows plainly by many passages from the ancients that this was indeed the original and most ancient system. With this the Doctor was vastly delighted. . . . It is remarkable that Bishop Berkeley in Ireland, Mr. Hutchinson in England, and Abbé Pluche in France, the greatest men of the age, without any communication with each other should at the same time, though by different media come into the same conclusion, namely, that the Holy Scriptures teach the only true system of natural philosophy as well as the only true religion, and that Mr. Franklin in America should at the same time, without any design, by his electrical experiments greatly confirm it.³⁰

Johnson now became obsessed with the study of Hebrew. He made it a basic part of the curriculum at King's College, he preached sermons reinterpreting Hebrew texts, he taught Hebrew to his six-year-old grandson, and he devoted the last years of his life to writing a Hebrew Grammar.

This misplaced scientific enthusiasm is more than amusing, it is pathetic. For it is a tribute to a mind which would not compromise, and which followed fearlessly a doomed philosophy. His dominant purpose, which he himself said was "to make the study of nature subservient to religion," was profoundly conceived. He scorned the popular idea that science is science and religion is religion, and each must tolerate the other. Such a "separation of powers" was as much a confession of fear of knowledge as the political doctrine of checks and balances is a confession of fear of government. A genuine devotee of wisdom will never stop until he has made "the study of nature subservient to religion," or, to put it into less offensive language, to make religion grow out of a scientific understanding of nature. In this he possessed neither the dialectical skill nor the imagination of Berkeley and Edwards, but he was more persistent than either of them in attempting to reunite two realms of the mind which were constantly diverging. He had an implicit faith in the scientific value of the orthodox theology, and his enormous efforts to prove this true made him appear grotesque even to his contemporaries, but at least he revealed thereby a greater intellectual vigor and sincerity and a profounder sense of

³⁰ *Autobiography*. In Vol. I, p. 45. See also *Elementa Philosophica*, below Part X.

the issues ultimately at stake. Both Berkeley and he had the misfortune to seize upon an obsolescent tradition to help them out of the difficulties they found in a new one.

But Johnson was at least more fortunate than Berkeley in that no sceptics exploited his clever dialectics for their own sinister ends. For Johnson's espousal of Berkian idealism met with little favor or following in this country. His *Elementa Philosophica*, in which he expounded it, was published by Franklin and used as a text at King's College during the seven years Johnson was at its head, and for a short time thereafter. Otherwise it found little circulation. The Anglican clergy were neither competent nor interested in technical philosophy. The physical scientists, or "natural philosophers," like Franklin and Colden, regarded it as merely ingenious and too fantastic. The theologians whom it might have interested were captivated by the idealism of Edwards, which was at once more orthodox and more familiar, and hence more plausible. And as for the schools and academies, they found Paley less original, less provocative, more fashionable, hence more teachable.

Samuel Johnson was one of those pathetic, but dramatic, figures who are caught between two worlds. The puritan world was crumbling. Johnson early escaped from its ruins and sought refuge in the urbane learning, the orderly government and rich civilization of the Anglican church and the British nation. But this complacent world was itself about to crumble, and he failed completely to understand the new forces which were impinging upon it. Free-thinking, liberty, whiggism, the new lights, independent reflectors—all these were terms of abhorrence to him. Finally in his anxiety he broke out into a *Rhapsody*, in which he allows Raphael, the guardian angel or "genius of the English America" to speak words of advice and warning:

[Let] every one endeavor to possess himself of an habit of the love of human nature, of Christianity, of his country, in general of such as being what are common to all parties, for by this means he would love everyone not as being of this or that or the other party, opinion, or denomination, but as being a man, a Christian, or at least an Englishman.

Let everyone be upon his guard against high soaring and conceited speculations in matters of religion and using or being imposed upon by words without any meaning, against spiritual pride and conceitedness and affectation of singularity or novelty, and against hard censorious judging one another on account of matters of speculation and private opinion or

differences of sentiment or expression in the explication of what all are alike obliged to believe and do. And let Christianity be received as being what it really is, *viz.*, not a system of speculations or fine precise philosophical notions given to gratify the curiosity of inquisitive men, but as a plain practical system designed alike for the whole of the human race and, therefore, expressed in the language accommodated to the capacities and apprehensions and fitted to the necessities and purposes of the general rate and bulk of mankind; being intended to make them not curious and disputatious but sincerely religious and virtuous and practically wise and good; not to fill their heads with airy notions, but their hearts with holy and heavenly affections and their lives with sober, pure, humble, devout, pious, righteous, faithful, benevolent and charitable behavior and actions, that they might by this means be qualified for His favor and be as happy as their natures are capable of both here and forever.⁸¹

But the advice of the guardian angel was unheeded. The sense of sin was gone. Americans continued to behave neither as Christians nor as Englishmen. Succeeding generations have substituted for Samuel Johnson's dictum, "the study of nature should be subservient to religion," another motto expressed by his son, William Samuel Johnson, when after the Revolution, as President of Columbia (not King's) College, he wrote to a fellow educator, "Science is the truest security of liberty."⁸² The study of nature was, to be sure, still subservient to religion, but the religion had changed to the religion of Liberty.

⁸¹ *Raphael, or The Genius of the English America: A Rhapsody*. Below, Part XI.

⁸² Letter to Judge Iredele, Aug. 17, 1795.

PART I

SYNOPSIS PHILOSOPHIAE NATURALIS

With an English Translation by Jacob Hammer

SYNOPSIS PHILOSOPHIAE NATURALIS ¹

ceu PHYSICAE

Questionibus et Responsionibus explicata

PROLEGOMENON

Ques. 1a. Unde dicitur Physica?

Res. Physica appellatio Graeca est a nomine φύσις quod est a φύω verbo, nascor. Physica enim agit de iis rebus quae nascuntur & producuntur non arte sed natura.

Q. 2. Quotuplex est Physica?

R. Physica est Naturalis aut Medicinalis. Naturalis est tantum hujus Loci.

Q. 3. Unde constat Physica Naturalis?

R. Physica naturalis constat ex regulis Catholicis quarum lumine rerum natura intelligatur.

Q. 4. Ubi inveniuntur et quibus adminiculis colliguntur istae regulae catholicae?

R. Regulae istae catholicae inveniuntur ex rebus creatis (ubi existunt fundamentaliter et non solum in mente humana aut libro) et colliguntur Lumine Scripturae Sacrae rationis humanae sensu observationis inductionis & Experientiae.

Q. 5. Quomodo istae regulae disponendae sunt in Physica?

R. Regulae istae disponendae sunt in Physica Methodice et Ordinate.

Q. 6. Quaenam Methodus eligenda est in ordinate et methodice regulis istis disponendis?

R. Cum regulae istae catholicae ex rebus creatis inveniuntur et colliguntur praecipue lumine Scripturae sacrae et rationis:

Rationi maxime consentaneum est disponere juxta Methodum et ordinem Creationis, In qua progressus fuit immediate a rebus per-

¹ This manuscript probably dates from about 1714. The text was edited by Dr. Jacob Hammer, of Hunter College, New York City, and the greater part of the translation is also his. The manuscript was written in an exceptionally small script and is in a bad state of preservation. In addition, the Latin is corrupt. As a result of these factors, it was necessary to use conjecture occasionally in translating and to indicate frequent lacunae in the text.

A SYNOPSIS OF NATURAL PHILOSOPHY OR PHYSICS

Expounded in Questions and Answers

PROLEGOMENON

Q. 1. What is the origin of the term “Physics”?

A. Physics is a Greek term, from the noun φύσις, which is derived from the verb φύω, I am born. For physics deals with those things which are generated and are produced not by art but by nature.

Q. 2. How many kinds of physics are there?

A. There is natural physics and medical. Only the natural is here treated.

Q. 3. Of what does natural physics consist?

A. Natural physics consists of catholic rules, by whose light the nature of things is understood.

Q. 4. Where are these catholic rules discovered, and by what means are they brought together?

A. These catholic rules are discovered in things created, (where they exist in a fundamental way, and not merely in the human mind or books); and they are brought together by the light of the sacred scriptures, of human reason, of sense observation, of induction and experience.

Q. 5. In what way must these rules be arranged in physics?

A. In physics these rules must be arranged in a methodical and orderly way.

Q. 6. What method must be chosen in arranging these rules in a methodical and well ordered way?

A. Since these catholic rules are discovered and brought together by the light of the Holy Scriptures and reason, it is particularly in

fectis ad res perfectas gradatim & hinc Natura constans aut *inconstans*; et cur natura in Constanti a minore perfecto ad magis perfectum et inter gradatim perfecta primo formata fuerunt Elementa deinde Elementaria. Inter autem Elementaria primo imperfecte mista (non formaliter sed fundamentaliter) Meteora nempe & Insecta. Deinceps mista perfecte et inter perfecte mista primo Metalla seu Mineralia et Lapis praeiosus, & Animata. Et inter animata quae habuere animam simplicem ut Vegetativa nempe Plantae et motiva nempe stella et postremo quae habuerunt Animam Compositam ut Sensitiva et homines.

Q. 7. Quare Peripatetici istam methodum non sequuntur?

R. Peripatetici istam methodum non sequuntur quia non Mosen sed Aristotelem sequuntur; et philosophiam suam discunt non ex sacris paginis sed ab Aristotele ethnico. Et quia totum ambitum naturae rerum non percurrunt sed aliquas partes tantum tractant. Objectum enim Physicae limitant et multa e Physica excludunt ut Coelum Supremum & Angelos, quorum natura ibi aut nulibi consideratur.

DE PHYSICA

Ques. 1. Quid est Physica naturalis?

Res. Physica naturalis est ars bene naturandi.

Q. 2. Quare dicitur Ars?

R. Ars dicitur quia est Idea Eupraxias regulis Catholicis methodice delineata.

Q. 3. Quare dicitur Ars bene naturandi?

R. Dicitur Ars bene naturandi non quod docet opera naturae fuere, Sed quia est ars bene cognoscendi intelligendi inspiciendi naturam et constitutionem & actus rerum omnium in Natura.

accord with reason to arrange systematically the method and order of creation. In which there was an advancement immediately from things perfected to things being perfected gradually, and hence [the distinction between] unchangeable and changeable nature, and the reason why among constant natures there is a [hierarchy] from the less to the more perfect, and among things gradually being perfected the elements were formed first and later the things compounded of elements. For among compounded things which were imperfectly compounded from the first (not merely formally but really) there belong beyond doubt meteors and insects. Later came those perfectly compounded, and among those perfectly compounded from the first are metals and minerals and precious stones and animate beings. And among animate beings there are those which have a simple soul, as [for example] vegetative beings like plants, and of course moving beings like stars, and lastly those which have a composite soul, as sensitive and human beings.

Q. 7. Why do not the Peripatetics follow this method?

A. The Peripatetics do not follow this method because they do not follow Moses but Aristotle; and learn their philosophy not from the sacred pages, but from the heathen Aristotle, and because they do not run through the whole course of the nature of things, but deal only with certain parts of it. For they restrict the object of physics and exclude many things from physics as for example, the highest heaven and the angels, whose nature is nowhere considered.

OF PHYSICS

Q. 1. What is natural physics?

A. Natural physics is the art of [explaining] well the nature [of things].

Q. 2. Why is it called an art?

A. It is called an art because it is the idea of a skilled practice delineated in a methodical way by catholic rules.

Q. 3. Why is physics called the art of explaining well the nature of things?

A. It is called the art of explaining well the nature of things not because it teaches what the works of nature have been, but because it is the art of becoming thoroughly acquainted with, understanding and inquiring into nature, and the structure and actions of all things in nature.

Q. 4. Quid est Objectum adaequatum Physicae?

R. Objectum adequatum Physicae non est corpus naturale quovis modo consideratum. Sed Natura ceu res nata creata et formata vel quae habet naturam ortam ex principiis. Quod est et non est ortum ex principiis (ut Causa prima) non pertinet ad Physicam sed omnia a principiis orta congenitis aut praeeistentibus ad illam pertinent.

Q. 5. Quomodo sumitur vox Natura?

R. Vox Natura stricte sumitur vel late.

Q. 6. Quid est Natura Stricte Sumpta?

R. Natura Stricte Sumpta est vis quaedam ex congressu materiae et formae substantialis producta et inest supposito primo & per se. Certum enim est Deum in prima creatione singulis rebus formatis vias indidisse proprias et quasi nativas vires et facultates quas naturas dicimus ultra quas quidquid fit extra Ordinaria Dei potestate fit, et dicitur Supernaturale vel supra naturae ordinem nempe miraculosum.

Q. 7. Quid est Natura Late Sumpta?

R. Natura Late Sumpta est res nata et composita quamvis non ex Elementis tamen ex materia et forma ceu principiis internis naturae essentialibus una cum omnibus ejus affectionibus partibus et speciebus quo ad naturas earum consideratis et ita sumptis objectum adaequatum est physicae. Nam Physica totum ambitum Naturae percurrit.

Q. 8. Quare dicitur Corpus naturale non est objectum adaequatum Physicae?

R. Corpus naturale non dicitur esse objectum adaequatum Physicae quia corpus non pertinet ad physicam (sed Mathematicam) in se quatenus naturale et natura rerum corporalium est pars tantum rerum existentium quae quatenus naturales sunt aequae ad Physicam pertinent & Corpus Naturale quatenus illud naturale.

Q. 9. Ex quibus principiis natura constat?

R. Principia interna ex quibus natura constat sunt tantum duo viz. Materiale et Formale. (Privatio enim tantum est terminus a quo incipit Natura ut res creata est e nihillo nihillum tamen non est rei principium non ens enim non est rei principium) quae duo

Q. 4. What is the adequate object of physics?

A. The adequate object of physics is not natural bodies considered in any manner at all, but rather nature, that is things generated, created and formed, or whatever has a nature generated from principles. Whatever is and has not been generated from principles (as the first cause) does not belong to physics, but everything that is generated from principles whether it has its origin from elements produced together and generated at the same time, or pre-existing, belongs to physics.

Q. 5. How is the word "nature" used?

A. The word "nature" is used either narrowly or broadly.

Q. 6. What is nature taken narrowly?

A. Nature taken narrowly is a certain power produced by the close union of matter and essential form, and inheres, *i. e.*, its being is primary and *per se*. For it is certain that God in the first creation endowed separately formed things with their own ways and as it were, innate powers and abilities, which we call their natures; and if something happens beyond them it happens through the extraordinary power of God and is called above the order of nature, that is to say, miraculous.

Q. 7. What is nature taken broadly?

A. Nature taken broadly is a thing generated and composed, although not of elements, yet of matter and form or internal essential elements of nature together with all its qualities, parts, and species, which together are regarded as their natures; and taken thus it is the adequate object of physics. For physics embraces the whole course of nature.

Q. 8. Why is it said that a natural body is not an adequate object of physics?

A. A natural body is said not to be the adequate object of physics because a body does not belong to physics as such, (but to mathematics in so far as it is natural. And the nature of corporal things is only a part of existing things which, in so far as they are natural equally belong to physics as well as a natural body in so far as it is natural.

Q. 9. Of what principles does nature consist?

A. The internal principles of which nature consists are only two, *viz.*, the material and the formal. (For privation is only a limit from which nature takes its origin, for though things are created from nothing, yet nothing is not a principle of things, for non-

principia sunt interna naturam constituentia & absolute necessaria ad ejus essentiam et existentiam sine quibus non est essentia nec potest per se subsistere. Non est causa nec effecta producit non est Subjectum nec Adjunctum habet nec bona nec mala, nec justa aut injusta non convenit nec differt, non opposito disparatur vel contraria non comparantur, non est par vel impar, similis aut dissimilis non distribuitur nec definitur nec ullo testimonio suo ornari potest. Q. 10. Num datur Ens aliquod in rerum Natura quod non constat ex his principiis?

R. Non datur ens aliquod Substantiale in rerum natura non compositum ex Materia et Forma Physica. Deus tantum est Ens vere et proprie simplex. Ens a primo compositum est vel ex principiis congenitis & concreatis ut Coelum Supremum et Angeli (qui non sunt entia Rationis vel fictitia) vel ex principiis praeexistentibus ut Elementum et Elementatum.

Q. 11. Quid est naturae principium Materiale?

R. Principium Naturae Materiale est illud in Natura Substantiale quo res nata materiatur.

Q. 12. Quid de principio primo materiali concipere possumus?

R. Est illud in natura quod est materia sed quod ad ejus Entitatem attinet absolutam definiri non potest, quia nihil de eo a priori notum est. Colliguntur tamen 1. Esse a Deo immediate Creatum. 2. Esse aliquid Substantiale quippe quod rem substantialiter constituit vel pars essentialis substantiae: Et consideratur respective ad naturam cujus principium dici potest: 1. Esse exceptivum formae vel propensitatem habere ad formam recipiendam. 2. Indifferenter se habere ad quamlibet formam. 3. Esse illud ex quo res nata est. 4. Esse Principium principale passionis quo res est possibilis et mutabilis.

Q. 13. Quid est Naturae Principium Formale?

R. Principium naturae formale est illud substantiale quo res nata formatur.

Q. 14. Quid de principio Naturae primo Formali sciri potest?

R. Nihil de principio primo formali magis (ut est in se) sciri potest quam de Materiali. Sed 1. Fuit a Deo immediate creatum & materiae

being is not a principle of things) which two principles are internal, constituting the nature of a thing, and absolutely necessary to its essence and existence, without which there is no essence, nor could anything subsist *per se*. It is not a cause nor does it produce effects; it is neither subject nor adjunct; it has neither good nor evil, just nor unjust, it has no opposite, can not be related to contraries, is neither equal nor unequal, similar nor dissimilar, can not be classified or defined, nor can it be established by an evidence of its own.

Q. 10. Is there any being in the nature of things which does not consist of these principles?

A. There is no substantial being whatsoever in the nature of things which is not composed of physical matter and form. God only is a being truly and particularly simple. A being which is basically compound is compounded either of principles produced by the same act of generation and creation as it itself, as the highest heaven and the angels (who are not creations of reason or fictitious beings) or from pre-existing principles as elements and compounds.

Q. 11. What is the material principle of nature?

A. The material principle of nature is that substantial being in nature which furnishes the material for the generation of a thing.

Q. 12. What are we able to know about the first material principle?

A. There is that in nature which is matter, but which cannot be defined with reference to its absolute being, because nothing is known of it *a priori*. However the following are adduced: (1) that it is immediately created by God; (2) it is something substantial inasmuch as it constitutes in a substantial way what a thing is or it is an essential part of the substance. And we may consider that it is possible to say concerning the nature of this principle that: (1) it is without form or it has a tendency to receive form; (2) it is indifferent to what form it takes; (3) it is this from which a thing is generated; (4) it is the primary principle of passivity, by which a thing is possible and changeable.

Q. 13. What is the formal principle of nature?

A. The formal principle of nature is that substantial being by which a generated thing is formed.

Q. 14. What can be known about the formal first principle of nature?

A. Nothing more can be known about the formal first principle (as it is in itself) than about the material. But (1) it was immediately

creando ingeneratum. 2. Extra materiam et sine ejus concursu Subjective nec sit nec subsistit nec operatur: Nullo tamen modo a materia nec educitur e potentia materiae nam principia non fiunt ex se mutuo. 3. Fuit substantiale quid et immateriale quod permeavit materiam totam eamque implevit se ipso mirabili modo. 4. Fuit principium actionis et fuit origo formarum omnium quae ex illo erant immensurae. Nam ut Formae de materia non educuntur ita non immediate creantur sed a forma prima formantur.

Q. 15. Quenam sunt Naturae Affectiones quae ex Materiali & formali unitis oriuntur?

R. Affectiones non eodem sensu accipiuntur, sed 1. Pro affectibus internis humani amoris nempe et odii. 2. Pro variis aspectibus et habitudinibus rerum inter se quae in Logica considerantur. 3. Intendunt illa quae quamvis non concurrunt tamen naturam ipsam constitutam et e causis existentem naturaliter sequuntur; & illa adjuncta sunt. In hac ultima significatione accipiuntur cum de natura praedicantur. Affectio igitur (ut hic sumitur) est id quod de natura praedicabile est Physice in Concreto; & reciproce, omne quod de natura praedicabile in concreto est naturae affectio.

Q. 16. Quenam sunt istae affectiones?

R. Istae Affectiones Naturae sunt essentiam (creatam nempe) habere, Derivatio et Dependencia, Compositio. Substantialitas, Accidentia habere, Necessitas, Contingentia, Relativitas, mutabilitas, Unitas, veritas, Bonitas, Activitas, Possibilitas, Quantitas, Qualitas, Localitas, Temporalitas, Motus, Mensurabilitas, & Perfectabilitas in suo genere.

Q. 17. Quid est Essentiam habere?

R. Essentia est id in qualibet re quod ex materiali & formali unitis immediate oritur. Essentiam igitur habere est esse et clarius existere quando de natura praedicatur natura et est Ens & Existens.

Q. 18. Quare derivatio et dependencia affectio naturae dicuntur?

R. Quia omnis natura est ens a primo derivatum et ab eo dependet.

created by God and generated with the creation of matter. (2) Outside of matter and without its coöperation as a subject it neither is nor subsists, nor operates. Nevertheless it is by no means produced by matter nor derived from the potentiality of matter, for the principles are not derived from each other. (3) It was something immaterial, which penetrated the whole of matter and made it replete with itself in some wonderful way. It was the principle of action and origin of all forms which proceeded from it in boundless measure. For as forms are not derived from matter, so they are not created immediately but are formed by the first form.

Q. 15. Which are the affections of nature that arose from the combination of the material and formal principles?

A. The affections are not interpreted in the same sense, but are used (1) for internal affections of human love and hate; (2) for different aspects and conditions among the things considered in logic; (3) they signify those things which although they do not belong together, are nevertheless constituted by the same nature and follow from the same causes, and these are adjuncts. They are taken in this last sense when they are predicated of nature. An affection therefore (as it is here understood) is that which is predicable of nature physically, concretely, and conversely everything that is predicable of nature concretely is an affection of nature.

Q. 16. What are these affections?

A. These affections of nature are: having an essence (a created one, of course), derivation and dependence, composition, substantiality, having accidents, necessity, contingency, relationship, mutability, unity, truth, goodness, activity, possibility, quantity, quality, locality, temporality, motion, mensurability and perfectability each in its own kind.

Q. 17. What is it to have an essence?

A. Essence is that in any thing which arises immediately from the union of the material and formal. Therefore to have an essence is to be, and more definitely, to exist whenever a nature is predicated of a nature; and it is a being and existence.

Q. 18. Why are derivation and dependence called an affection of nature?

A. Because every nature is a being derived from a primary being and is dependent on it.

Q. 19. Quare Compositio dicitur Naturae Affectio?

R. Quia omnis natura a materia et forma composita est. Et non datur in rerum Natura Ens vere et proprie simplex.

Q. 20. Quare Substantialitas dicitur Naturae Affectio?

R. Quia Natura est Ens per se subsistens & variis accidentibus substans.

Q. 21. Quid est Accidentia habere?

R. Accidens est quod rei Essentiae accidit et additur et ab illa fluit et illam consequitur. Accidentia igitur habere est accidentibus Substare et Adjunctis inseparabilibus et separabilibus subjici.

Q. 22. Quid est Necessitas?

R. Necessitas est affectio secundum quam Natura aliter se habere non potest quam habet.

Q. 23. Quibus respectibus Natura dicitur aliter se habere non posse?

R. Natura non potest nec potuit se aliter habere 1. respectu efficientis causa 2. Respectu causarum essentialium 3. Respectu finis 4. Respectu Adjunctorum essentialium.

Q. 24. Quid est contingentia?

R. Contingentia est naturae affectio secundum quam potest se aliter atque aliter habere quam habet.

Q. 25. Quibus respectibus natura dicitur se aliter habere posse?

R. Natura potuit aliter habere posse (ex Sensu diverso respectu circumstantiarum & Adjunctorum Separabilium.

Q. 26. Quid est Relativitas?

R. Relativitas est Naturae affectio secundum quam natura apta est relativa esse vel relationem habere. Et sunt omnes creaturae ad invicem [?] relatae.

Q. 27. Quid est Mutabilitas?

R. Mutabilitas est naturae affectio qua mutabilis est vel mutari potest.

Q. 28. Quid est Unitas?

R. Unitas est naturae affectio qua apta est ad unionem et continuitatem in partibus suis in seipsis.

Q. 29. Quid est Veritas?

R. Veritas est naturae affectio qua convenit cum principiis suis essentialibus, ut Verus Homo qui constat vere ex principiis humanis.

Q. 19. Why is composition called an affection of nature?

A. Because every nature is composed of matter and form. And in the nature of things there is no being truly and properly simple.

Q. 20. Why is substantiality called an affection of nature?

A. Because a nature is a thing subsisting by itself and is a substance to various accidents.

Q. 21. What is it to have accidents?

A. An accident is what belongs to the essence of a thing, and is added to it and flows from it and follows it. Therefore to have an accident is to subsist under accidents and to be subjected to adjuncts separably or inseparably.

Q. 22. What is necessity?

A. Necessity is an affection in accordance with which nature cannot be constituted differently than it is.

Q. 23. In what respects is nature said to be unable to be constituted differently?

A. Nature cannot and could not be constituted differently (1) with regard to its efficient cause; (2) with regard to its essential causes; (3) with regard to its end; (4) with regard to its essential adjuncts.

Q. 24. What is contingency?

A. Contingence is an affection of nature in accordance with which nature can be constituted differently than it is.

Q. 25. In what respects is nature said to be able to be constituted differently?

A. Nature could be constituted differently (in a different sense) with regard to its circumstances and separable adjuncts.

Q. 26. What is relativity?

A. Relativity is an affection of nature in accordance with which nature is fit to be relative or to have relations. And all creatures are without exception related.

Q. 27. What is mutability?

A. Mutability is an affection of nature by which nature is changeable or can be changed.

Q. 28. What is unity?

A. Unity is an affection of nature, by which it is fitting that there be unison and continuity among its parts.

Q. 29. What is truth?

A. Truth is an affection of nature by which it agrees with its essential principles, as a "true man" who truly is composed of human principles.

Q. 30. Quid est bonitas?

R. Bonitas est naturae affectio qua apta est ad usum suum inservire cui designatur.

Q. 31. Quid est activitas?

R. Activitas est Naturae affectio qua apta est varias operationes edere intra vel extra suo modo.

Q. 32. Quid est Possibilitas?

R. Possibilitas est naturae affectio qua cujuslibet impressionis et mutationis ab agente capax est.

Q. 33. Quid est Quantitas?

R. Quantitas est naturae affectio qua natura est quanta et non infinita est, sed ad certum modum extensa est ita ut datur in ea maximum et minimum.

Q. 34. Quotuplex est Quantitas?

R. Quantitas duplex est Discreta nempe et continua illa numerus haec magnitudo dicitur.

Q. 35. Num datur numerus actu maximus?

R. Datur numerus numeratus actus maximus sed non numerans i. e. definita est rerum magnitudo. Sed numerus mathematice abstractus potest per eandem numeri regulam perpetuo augeri. Sic etiam magnitudo potest mathematice rationaliter in infinitum augeri — quamvis natura ipsa est necessario undique finita.

Q. 36. Quid est Qualitas?

R. Qualitas est Naturae affectio cujus ratione Natura dicitur talis aut qualis et a forma orta est.

Q. 37. Quid est Localitas?

R. Localitas est Naturae affectio ratione cujus natura apta est esse et necessario est in loco.

Q. 38. Quid est Locus?

R. Locus est Spatium rei locatae undiqueque juxta omnes dimensiones omnesque loci differentias adaequatum loci materiale est natura extensa formale est ejus receptivitas.

Q. 39. Quid est locus internus?

R. Locus internus est res ipsa in qua omnes continentur eius partes ut locus externus est extra rem et eam continet.

Q. 40. Estne Coelum extimum in loco?

R. Coelum extimum non proprie est in loco quia a nullo continetur nec habet Subjectum extra se nec aliud a se. A Deo autem continetur et sustentatur non ut a loco sed ut a Causa.

Q. 30. What is goodness?

A. Goodness is an affection of nature by which it is fit to serve the use for which it is designed.

Q. 31. What is activity?

A. Activity is an affection of nature by which it is fitted to produce various works either in its own manner or in some extraneous manner.

Q. 32. What is possibility?

A. Possibility is an affection of nature by which it is capable of any impression and change by an agent.

Q. 33. What is quantity?

A. Quantity is an affection of nature by which nature is of such and such a size, and is not infinite, but is extended in a certain manner, so that there is within it maximum and minimum.

Q. 34. What kinds of quantity are there?

A. Quantity is two-fold; discrete and continuous — the former is called number and the latter magnitude.

Q. 35. Is there actually a greatest possible number?

A. There is a number actually numbered the greatest, but not a numeral, *i. e.*, a defined magnitude of things. But a mathematical abstract number can be perpetually increased by the same rule of number. So also a quantity can be conceptually increased to infinity, however, nature herself is necessarily everywhere finite.

Q. 36. What is quality?

A. Quality is an affection of nature by reason of which nature is called of such and such a sort, and it is derived from form.

Q. 37. What is locality?

A. Locality is an affection of nature by reason of which nature is fitted to be and necessarily is in a place.

Q. 38. What is place?

A. Place is the space of a located thing, and everywhere alike in all dimensions and all diversities of place. Coördinate with place on the material side is extended nature on the formal side. It is its receptivity.

Q. 39. What is an internal place?

A. An internal place is the thing itself in which all its parts are contained, just as external place is outside the thing and contains it.

Q. 40. Is the outermost heaven in space?

A. The outermost heaven is not properly speaking in space, because it is contained by nothing, nor has it a subject outside it, nor other

Q. 41. Num ullus est locus sine naturali locato?

R. Ut in uno loco plura naturalia esse non possunt neque unum naturale in pluribus locis eodem tempore, Sic nec ullus est locus sine locato naturali neque datur intra naturam vacuum neque penetratio dimensionum.

Q. 42. Quid est Temporalitas?

R. Temporalitas est naturae affectio cujus ratione est in tempore et dicitur temporalis.

Q. 43. Quid est Tempus?

R. Tempus est rei duratio successiva ut mensurabilis in sua existentia quae actu mensuratur a motu.

Q. 44. Quid est motus?

R. Motus est mutatio successiva qua a termino a quo ad terminum ad quem res progreditur.

Q. 45. Quot in Motu considerata sunt?

R. In motu considerandi sunt movens, mobile, actus & terminus a quo & terminus ad quem.

Q. 46. Quot Sunt genera Motus?

R. Ut motus terminatur habet vel Substantiam vel quantitatem vel qualitatem vel locum ita genera ejus habentur vel generatio & corruptio, augmentatio vel diminutio alteratio & locatio.

Q. 47. Quotuplex est Motus?

R. Motus est 1.) Localis qui est Simplex (i e. Centro ad centrum aut circularis vel mixtus qui ex utriusque varie componitur ut est animantium. 2.) Naturalis (ut contra distinguitur ab animali) qui est uniformis et ab eodem modo (in eadem natura perpetuo sit) vel unam habet rationem et legem immutabilem. 3.) violentus qui est ab agente extrinsecus impellente & promovente.

Q. 48. Quomodo motus naturae convenit et est naturae affectio?

R. Motus Naturae convenit non simpliciter et absolute sed secundum quid omni naturae enim non convenit.

Q. 49. Quid est Mensurabilitas?

to it. However, it is contained and supported by God, but not in a spatial, rather in a causal manner.

Q. 41. Is there any place without a natural location?

A. Just as there cannot be many natural beings in one place, nor one natural being at the same time in many places, so there is no place without a natural location, nor does there exist within nature any vacuum nor an interpenetration of dimensions.

Q. 42. What is temporality?

A. Temporality is an affection of nature, whose ground is in time and is called temporal.

Q. 43. What is time?

A. Time is the successive duration of a thing, in so far as measurable in its existence, which is measured by an act involving motion.

Q. 44. What is motion?

A. Motion is a successive change by which there is a progress from a terminus *a quo* to a terminus *ad quem*.

Q. 45. How many things must be considered with regard to motion?

A. With regard to motion we must consider: the thing moving, the movable, the act and terminus *a quo* and terminus *ad quem*.

Q. 46. How many kinds of motion are there?

A. As motion is limited, it has substance, and quantity, and quality, and place, and accordingly its kinds are considered to be generation and degeneration; growth and decline; change and location.

Q. 47. How complex is motion?

A. Motion is (1) Local, which is simple (*i.e.*, from center to center), or circular or mixed, which is variously composed of both, as in animate beings.

(2) Natural, (as contra-distinguished from animal) which is uniform and in the same manner (is always in the same nature) or has one ground and an immutable law.

(3) Violent, which is by an agent impelling and propelling from the outside.

Q. 48. How does motion agree with nature, and is it an affection of nature?

A. Motion agrees with nature not simply and absolutely, but secondarily, for it does not agree with all of nature.

Q. 49. What is mensurability?

R. Mensurabilitas est naturae affectio qua quoad ejus extensionem mensurabilis est et mensuram habet.

Q. 50. Quis est Perfectibilitas?

R. Perfectibilitas est Naturae affectio qua res nata non tam perfecta est, quin (sensu diviso) perfectior esse potuit.

Q. 51. Quomodo Natura primo distribuitur?

R. Naturae prima Distributio est sumitur e causis et est Integri in Membra. Natura enim est Multiplex et discontinua et simul collecta unum Mundum efficit.

Q. 52. Quid est Mundus?

R. Mundus est universa et pulcherrime coordinata naturae fabrica cujus membra diversa et distincta unum Integrum Suavissima Harmonia et decentissima compage constituunt. Contigua autem sunt sed non continua Firmissima tamen naturae lege coniuncta ita ut nec inter-positum vacuum nec confusam transpositionem admittunt.

Q. 53. Quot mundi sunt?

R. Mundus est tantum unicus non solum efficiente et fine sed etiam numero ordine methodo et contiguitate.

Q. 54. Quomodo mundus apparet esse unicus numero?

R. Mundus est unicus numero 1.) quia est naturarum et rerum omnium universitas & extra aut ultra universum non est aliud naturale 2.) omnia quae sunt aut Cogitari possunt quoad causas intrinsecas uno & unico genere conveniunt (et quoad causas extrinsecas) unica efficiente et fine & in unam Comprehensionem ad compaginem educunturi & unum Suum Creatorem optime representat.

Q. 55. Fuitne Mundus ab Aeterno?

R. Mundus neque fuit ab Aeterno neque esse potuit.

Q. 56. Qualis est Figura Mundi?

R. Figura mundi est rotunda sua figura capacissima commodissima et perfectissima est.

Q. 57. Quae in mundo observanda sunt?

R. In mundo observandi sunt partium integritas, unitas, ordo, methodus, proportio & harmonia; unde totius oritur intensiva et extensiva perfectio.

Q. 58. Quomodo secundo distribuitur Natura?

R. Mensurability is an affection of nature by which, with respect to its extension, it is measurable and has a measure.

Q. 50. What is perfectibility?

A. Perfectibility is an affection of nature, according to which a natural product is not so perfect, but that (in a distinct sense) it could be more perfect.

Q. 51. How is nature primarily divided?

A. The first division of nature is made from the point of view of causes; its members are integral, for nature is manifold and discontinuous and when collected makes one world.

Q. 52. What is the world?

A. The world is the universal and most beautifully arranged fabric of nature whose parts though different and distinct constitute one whole, by a most agreeable harmony and most fitting connection. They are contiguous but not continuous, yet so firmly connected by the law of nature, that they admit of no vacuum between them, nor confused transposition.

Q. 53. How many worlds are there?

A. There is only one world, not only in respect of its efficient cause and end but also in respect of number, order, method, and contiguity.

Q. 54. How does the world appear to be single in number?

A. The world is single in number because (1) it is the entire whole of all natures and things, and outside and beyond the universal nothing else naturally exists; (2) all things that exist, or can be thought of with respect to their inner causes, come under one single genus and (with respect to their outer causes) under one efficient cause, and end, and can be constructed into one intelligible system of connections which represents perfectly its one Creator.

Q. 55. Has the world existed from eternity?

A. The world neither has existed, nor could it exist, from eternity.

Q. 56. Of what kind is the shape of the world?

A. The shape of the world is round; its shape is the most spacious, most complete and most perfect.

Q. 57. What things must be observed about the world?

A. About the world there must be observed the integrity of its parts, their unity, order, method, proportion, and harmony; whence springs the intensive and extensive perfection of the whole.

Q. 58. How is nature divided in the second place?

R. Secundo naturae Distributio sumitur ex effectu & est generis in Species. Natura enim diversas species habet.

Q. 59. Quae sunt species Naturae?

R. Species naturae duae sunt Constans nempe et Inconstans; quamvis enim Mundus est Unicus natura in genere una, tamen partes habet varias, nontantum. Situ & ordine sed etiam essentia.

Q. 60. Quomodo Species Naturae dicuntur esse Constans & Inconstans cum Constantia & Inconstantia adjunctae affectiones sunt Naturae?

R. Quia quamvis Constantia & Inconstantia sunt naturae affectiones tamen natura ipsa est totum partibus essentiale; ita partes ejus propositae sub nominibus Naturae Constantis & inconstantis partes sunt Subjectivae quae dependunt a Natura pro eorum Constitutione.

Q. 61. Quid est Natura Constans?

R. Natura Constans est quae constanter & inseparabiliter constat & stabit in omne et omnem.

Q. 62. Quae sunt Affectiones Naturae Constantis?

R. Affectiones Naturae Constantis sunt 1.) Constat ex principiis concreatis congenitis & coexistentibus cum se ipsa 2.) Immediate perfecta & compacta fuit. 3.) Omnium nobilissima est. 4.) Nulla habuit principia praeexistencia. 5.) Origine nobilis & incorruptibilis. 6.) Quoad essentiam immutabilis & augmentationis nec diminutionis capax. 7.) Non nisi annihilatione destrui potest.

Q. 63. Quare natura Constans tractatur in Physica?

R. Natura constans tractatur in Physica 1.) Quia vere et proprie pertinet ad objectum Physicae. 2.) Ens est a primo substantiale et ergo Substantialiter est Materialium et formatum ergo a principiis substantialibus, Materialibus & Formalibus quae tractari debent in Physica. 3.) Est possibilis et Aliquo modo potentialis et subjicitur quantitati & qualitati & temporalitati compositioni & passioni affectionibus Naturae & ergo ubi natura tractatur tractari debet.

Q. 64. Quaenam sunt naturae constantis partes?

R. Partes naturae Constantis Subjectivae sunt Coelum extimum et Spiritus.

A. The division of nature in the second place is made from the point of view of its effects and is the division of genus into species. For nature has diverse species.

Q. 59. What are the species of nature?

A. There are two species of nature; *viz.*, the unchanging and the changing; for although the world is one by nature according to its genus, yet it has various parts, not only according to their position and order but even according to their essence.

Q. 60. Why are the species of nature said to be unchangeable and changeable when unchangeability and changeability are adjunct affections of nature?

A. Because, although unchangeability and changeability are affections of nature, yet nature itself is a whole essentially composed of parts; thus its parts designated by the names of nature, whether unchanging or changing, are subjective, *i. e.*, they depend upon nature for their constitution.

Q. 61. What is unchanging nature?

A. Unchanging nature is nature which remains constant and inseparable and will so remain forever.

Q. 62. What are the affections of unchanging nature?

A. The affections of unchanging nature are: (1) It consists of principles co-created, co-originated and co-existing with itself. (2) It was perfected and constructed immediately. (3) It is the most noble of all. (4) It has no preëxisting principles. (5) It is by its origin noble and incorruptible. (6) As to its essence it is immutable and capable of neither increase nor decrease. (7) It cannot be destroyed except by annihilation.

Q. 63. Why is unchanging nature treated in physics?

A. Unchanging nature is treated in physics because (1) it truly and expressly pertains to the object of physics; (2) it is a primary substantial being and, therefore, from its substantial aspect it is made of material and form and therefore has substantial, material and formal principles, which ought to be treated in physics; (3) it is possible and in a certain manner potential, and is subject to quantity and quality and temporality and composition and to undergoing the affections of nature, and consequently where nature is treated, it ought to be treated.

Q. 64. What are the parts of unchanging nature?

A. The parts of unchanging subjectival nature are the outermost heaven and spirits.

Q. 65. Quid est Coelum extimum sive Supremum?

R. Coelum Supremum est Suprema & nobilissima mundi regio Sacrae beatitudinis & beatorum sedes aeterna [?] circumambiens totum ambitum naturae inconstantis et eam continens.

Q. 66. Quale est Coelum supremum?

R. Coelum Supremum est 1.) Immobile. 2.) Sui plenum sine poris, et omnem partem habet solidam. 3.) Convexum Concavum. 4.) Terminatur sua essentia & non corpore aut loco externo. 5.) Luce ineffabili & Splendore praeditum est. 6.) Firmissimum et impenetrabile non rimosum aut dehiscens aut fluidum. 7.) Primo omnium Creatum.

Q. 67. Quid est Spiritus?

R. Spiritus est Natura Constans, vivens & intelligens.

Q. 68. Quotuplex est Spiritus?

R. Spiritus Duplex est viz. Angelus et Anima rationalis. Sed propter unionem cum Corpore Anima rationalis in homine demum consideratur.

Q. 69. Quid est Angelus?

R. Angelus est Spiritus non natus inesse corpori elementari eximia vita et Ratione & voluntate praeditus in Ministerium Dei creatus.

Q. 70. Quid de Angelis considerandum est?

R. 1.) Erant in principio omnes simul et immediate creati. 2.) Non sunt purae formae sed vere compositi ex Materia et forma. 3.) Subtilissimi, Spirituales, agiles, & puri. 4.) Omnes habent unam naturam communem. 5.) Minimam habent materia & plurimam formam hinc maxime agiles et nobis invisibiles. 6.) Possunt seipsis contrahere (sed non ad punctum) et extendere (sed non infinite) varie etiam figurare. 7.) Discunt communiter res, rerum artificium intuendo per analysin nempe Logicam etsi aliquando supernaturali infusione. 8.) Tum percipiendo, tum communicando percepta sunt promptissimi. 9.) Naturae perspicuae et activae nec tamen omniscii nec sine [?] Augmentatione scientiae.

Q. 71. Quid est Natura Inconstans?

R. Natura inconstans est quae ex principiis praexistentibus mediate perficitur et in ea resolvenda est.

Q. 72. Quae principia praesistentia ex quibus natura inconstans oritur?

Q. 65. What is the outermost or highest heaven?

A. The outermost heaven is the highest and noblest region of the world, the everlasting abode of sacred bliss and of the blessed, surrounding the whole orbit of changing nature and containing it.

Q. 66. Of what sort is the outermost heaven?

A. The outermost heaven is (1) immovable; (2) filled with itself without pores and solid in every part; (3) convex and concave; (4) limited by its own essence but not by any body or external space; (5) radiant with ineffable light and splendor; (6) perfectly rigid, impenetrable, without fissures, neither divided nor fluid; (7) the first of the whole creation.

Q. 67. What is a spirit?

A. A spirit is an unchanging, living and intelligent nature.

Q. 68. How many kinds of spirits are there?

A. Spirits are of two kinds, *viz.*, angels and rational souls. But on account of the union with the body the rational soul is treated below in connection with man.

Q. 69. What is an angel?

A. An angel is a spirit not born to dwell in a body composed of elements, exempt of life, reason and will, created expressly for the service of God.

Q. 70. What must be considered about angels?

A. (1) They were all created in the beginning at the same time and immediately. (2) They are not pure forms but are really composed of matter and form. (3) They are most fine, spiritual, light and pure. (4) All have our common nature. (5) They have least of matter and most of form, hence they are very light, and invisible to us. (6) They are able to contract themselves (but not to a point) and to expand (but not infinitely); hence assume different shapes. (7) They learn things jointly, by beholding the structure of things, undoubtedly by way of logical analysis, though sometimes with a supernatural admixture. (8) They are most ready to comprehend and to communicate what they have perceived. (9) They are of a transparent and active nature, but neither omniscient nor without increase of knowledge.

Q. 71. What is a changing nature?

A. A changing nature is a nature which is perfected out of preëxistent principles mediately, and can be resolved into them.

Q. 72. What are the preëxistent principles from which changing nature springs?

R. Principia praeexistentia e quibus Natura inconstans orta et in qua resolvenda est fuerunt Materiale et formale Massae illius quae in principio creata fuit informis, et inanis, et in tenebris involuta.

Q. 73. Quare massa illa informis dicitur?

R. Non quia nullam habuit formam essentialem (tum enim nullam habuit Essentiam aut existentiam neque quando omnia in illam revertuntur manere potuit in aeternum sine miraculo aeviterno Sed quia neque formositatem neque ornatum habuit, neque actum completum earum formarum quae ex illa post modum erant emersura.

Q. 74. Quid de massa illa prima tenendum est?

R. De Massa illa prima tenendum est 1.) Quod constat ex principiis concretis & coexistentibus. 2.) Omne fuit quod jam existit potentia quamvis non actu. 3.) Origo fuit et principium totius naturae inconstantis unde vita est. 4.) Manet usque in hunc diem et manebit in aeternum nunc in rebus ex illa ortis tum in se ipsa cum omnia in illam revertuntur. 5.) Pertinet ad naturam communem omnis rei inconstantis. 6.) Nulla habuit principia praeexistentia in quae reverti potest.

Q. 75. Quae sunt naturae inconstantis affectiones?

R. Affectiones naturae inconstantis sunt qualitates tam primae ut Calor et Frigus, Humiditas, Siccitas, quam secundae nempe Densitas, raritas, Gravitas, Levitas, Crassities et Subtilitas et generabilitas, corruptibilitas, capacitas & diminutionis & augmentationis & porositas.

Q. 76. Quae sunt primae Qualitates?

R. Primae sunt Qualitates illae quae ducunt suam originem a Massa prima & primo insunt naturae inconstanti & Radices sunt caeterarum.

Q. 77. Quid sunt Calor & Frigus et ceterae illae qualitates primae?

R. Calor est qualitas prima activa calefaciens congregans et segregans. 2.) Frigus est qualitas prima activa frigefaciens sed non segregans. 3.) Humiditas est qualitas prima activa humectans et suo termino difficulter alieno vero facile sese continens. 4.) Siccitas

A. The præexistent principles from which changing nature took its rise and into which it is to be resolved were the material and the form of that mass which was created in the beginning, shapeless, empty, and veiled in darkness.

Q. 73. Why is this mass called shapeless?

A. Not because it had no essential form (for then it would have no essence or existence, nor when everything returned to it could it abide through eternity without an eternal miracle), but because it had neither shapeliness nor adornment, nor the completion of those forms which later emerged from it.

Q. 74. What should we believe about this primary mass?

A. About this primary mass we should believe that (1) it consists of concrete and coëxistent principles; (2) it was all that exists now, potentially though not actually; (3) it was the origin and principle of the whole of changing nature, whence came life; (4) it remains even to this day and will remain forever, now in the things derived from it, and then in itself when all things return into it; (5) it pertains to the common nature of every changing thing; (6) it had no præexistent principles into which it could return.

Q. 75. What are the affections of changing nature?

A. The affections of changing nature are the qualities, the primary (as heat and cold, moisture and dryness), as well as the secondary (*viz.*, density, rarity, weight, lightness, thickness and thinness), and the ability to be generated and to decay, the capacity for decrease and increase, and porousness.

Q. 76. Which are the primary qualities?

A. They are those qualities which derive their origin from the primary mass, and are first within changing nature and are the roots of the others.

Q. 77. What are heat and cold and those other primary qualities?

A. (1) Heat is a primary, active quality, warming, gathering and separating. (2) Cold is a primary active quality, cooling but not separating. (3) Moisture is a primary active quality, which moistens and which is with difficulty contained within its own bounds but easily within some other object. (4) Dryness is a primary quality, drying up, hardening, and bringing solid consistency to fluids.

Q. 78. Which are the secondary qualities arising from the primary?

A. They are: (1) Density is a quality arising from cold, according

est qualitas prima exsiccans indurans & diffluentibus consistentiam adferens.

Q. 78. Quid sunt qualitates secundae quae ex primis oriuntur? nempe

R. 1.) Densitas est qualitas orta a frigore secundum quam partes subjecti immediate cohaerent & constringuntur. 2.) Raritas est qualitas a calore orta, habens partes extenuatas nec inter se stricte contextas. 3.) Gravitas est qualitas orta a frigore et a materia formam degravante et hebetante qua res deorsum inclinantur. 4.) Levitas est qualitas plerumque orta a calore et a forma materiam elevante et extenuante qua res cursum tendit. 5.) Crassities est qualitas orta a Siccitate habens partes solidas et augmentatas ideoque difficulter penetrabiles. 6.) Subtilitas est qualitas orta a calore partes tenues habens. 7.) Generabilitas qualitas qua res apta est ad novas formas induere generatio enim consistit in productione et unione novae formae cum materia. 8.) Corruptibilitas est qualitas qua res aptae sunt formas veteres amittere. 9.) Natura inconstans capax est augmentationis & diminutionis. 10.) Porositas est Affectio naturae inconstantis qua pervia est et penetrabilis at alienis porosum solide (quod est totum Sui plenum) opponitur; est a forma lacerante materiam, inde quo plus formae eo rariora sunt corpora.

Q. 79. Quis finis pororum est?

R. Pororum finis est ut esset commercium perpetuum inter has naturas in variis mundi partibus transmutationibus & motionibus quibus invicem agunt & patiuntur et etiam ascensu & descensu aliisque motibus localibus. Si nulli essent pori, sed omni sui plena, sequeretur statim universalis immobilitas quia penetratio corporum impossibilis.

Q. 80. Quomodo natura inconstans dividitur?

R. Natura inconstans dividitur in Elementum et Elementatum ceu in Corpus simplex & mixtum, Omnis enim natura inconstans est Elementum aut Elementatum. Elementum fit ex atomis.

Q. 81. Quid est Elementum?

R. Elementum est Natura inconstans cujus materiale & formale ex Massa illa prima immediate oriuntur.

to which the parts subjected immediately cling together and are drawn together.

(2) Rarity is a quality arising from heat having the parts thinned out and not really in contact.

(3) Weight is a quality arising from cold and from the matter's weighing down and blunting the form, on account of which things are bent downwards.

(4) Lightness is a quality commonly arising from heat and from the form's lifting and thinning out the matter whereby things hold their course.

(5) Thickness is a quality arising from dryness, having the parts solid and increased and therefore hardly penetrable.

(6) Thinness is a quality arising from heat, having fine parts.

(7) The ability to be generated is a quality, by which a thing is able to put on new forms, for generation consists in the production and union of a new form with matter.

(8) The power of decaying is a quality by which things are able to take off their old shapes.

(9) A changing nature is capable of increase and decrease.

(10) Porousness is an affection of changing nature, by which it is pervious and penetrable by others; a porous thing is opposite to a solid (which is entirely full of itself); it is due to the form piercing the matter, hence the more forms there are the rarer are the bodies.

Q. 79. What is the purpose of pores?

A. The purpose of pores is that there should be an unbroken intercourse among those natures in several parts of the world by way of shiftings and motions, by which they in turn act and react, and also by way of ascent and descent and other locomotions. If there were no pores and everything were full of itself, there would follow immediately a general immobility, because of the impossibility of penetrating bodies.

Q. 80. How is changing nature divided?

A. Changing nature is divided into elements and things compounded of elements, or into simple and mixed bodies, for every changing nature is either an element or something composed of elements. An element is made of atoms.

Q. 81. What is an element?

A. An element is a changing nature, whose material and formal causes arise immediately from that primary mass.

Q. 82. Quotuplex est Elementum?

R. Elementum est Levius et Superius ut Ignis & Aer vel Gravius et Inferius ut Aqua & Terra. Sed omnia aequae prima nec unum ex altero factum.

Q. 83. Quid est Elementum Ignis?

R. Elementum Ignis compositum fuit ex parte altissima et purissima Massae primae & ob summam Levitatem summum tenet locum & est Elementum calidissimum & levissimum & rarissimum & ob summam raritatem nonurit nec lucet.

Q. 84. Quid de Elemento Ignis observandum est?

R. De Elemento Ignis observandum est 1.) Quod in loco supremo naturae inconstantis est. Coelo tertio propior non subter sed supra concavum Lunae, a quo ad coelum 3m extenditur, Coelum secundum vel Actuositissimum dicitur) Stellatum conficiens 2.) Condensatum writ & lucet. 3.) penetrat, apparit, et acervat, dissolvit, digerit, maturat, et praecipuum vitae in natura inconstanti principium.

Q. 85. Quare Ignis Elementum dicitur?

R. Ignis dicitur Elementum quia 1.) In Constitutione Corporum animalium et in Aere aqua et terra et datur Ignis condensatus urens, lucens, calefaciens, et unde est nisi eo Elemento. Ignis non est [. . .] elemento Aeris et Aquae et terrae et non ex immediate creatusergo ex eo elemento Ignis, 2.) Qui Summus calor alicui corpori Simplici debetur, Ac non convenit nec Aeri nec Aquae nec Terrae ergo Igni. 3.) Calor implantatus fuit in rebus in primaeva creatione, Sed quo modo? certe non per immediatam creationem tum imum corruptibilis non esset, quia nullum habuit principium praeexistens in quod reversus est, sed per formationem ab elemento ignis, ergo datur elementum ignis a quo calor communicatur rebus partim per propagationem a primaeva creatione partim per Derivationem a Sole.

Q. 86. Quid est Elementum Aeris?

R. Elementum Aeris compositum est ex parte fumanda et indifferenter pura massae primae et est elementum humidissimum, leve, repletivum, diffusivum & fluidum.

Q. 87. Quid de Elemento acre tenendum?

R. 1.) Aer igni proximum est et coelum primum constituit. 2.) Materia sive Subjectum omnis soni cujus forma est Correspon-

Q. 82. How many kinds of elements are there?

A. There are the lighter and higher, fire and air, and the heavier and lower, water and earth, but all are equally primary and none is made out of another.

Q. 83. What is the element of fire?

A. The element of fire was composed from the highest and purest part of the primary mass, and because of its lightness it seeks the highest places, and because of its rarity it does not burn or shine.

Q. 84. What is there to be observed about the element of fire?

A. About the element of fire there is to be observed (1) that it is in the uppermost place of changing nature. It is near the third heaven, not beneath but above the vault of the moon from which it extends to the third heaven, comprising the second called [———] or the starry heaven. (2) When condensed it burns and shines. (3) With great energy it penetrates, becomes visible, gains space, and throws together, dissolves, ripens, and is the foremost principle of life in changing nature.

Q. 85. Why is fire called an element?

A. Fire is called an element (1) because in the constitution of animal bodies and in air, water, iron, and earth, there is found condensed fire, burning, shining, warming; whence comes this, if not from this element? Fire is not derived from the element of air, or water, or earth and is not immediately created. Therefore it must come from this element of fire. (2) Because we assume that heat is due to some simple body, and it does not agree either with air, or water or earth, consequently it must be due to fire. (3) Heat was implanted in things in the primeval creation, but how? Certainly not by immediate creation, then it would not be fundamentally corruptible, since it would have no preëxistent principle into which it could return, but rather by its formation out of the element of fire; consequently there is an element of fire by which heat is communicated to things, partly through propagation from the primeval creation, partly through derivation from the sun.

Q. 86. What is the element of air?

A. The element of air is composed of the vaporous and undifferentiated pure part of the first mass and is the most moist element, light, abundant, diffuse, and fluid.

Q. 87. What are we to believe about the element of air?

A. (1) Air is nearest to fire and constitutes the first heaven. (2) It is the matter or subject of all sound, whose form is the echo which

denia quam Aer incipit ad positionem corporum collisorum quae deinde propagatur et continuatur in aere ad certam undique distantiam. 3.) In tres distinguitur regiones Supremam mediam et infimam. 4.) Meatus Corporum permeat & implèt. 5.) Perspicuus est & medium diaphanum ob tenuitatem.

Q. 88. Quid est Elementum Aquae?

R. Elementum Aquae compositum fuit ex parte crassiore massae primae et est elementum frigidissimum, humidum, grave, Terram undiqueque ambiens & influens ordine aeri terra proximius.

Q. 89. Quid est Elementum Terrae?

R. Elementum Terrae compositum fuit ex parte crassissima massae primae et est Elementum Siccissimum, frigidum, densissimum, gravissimum et immobile et est Mundi Centrum.

Q. 90. Quid de Elementis Aquae et Terrae observandum est?

R. 1.) Haec duo elementa Globum unum faciunt et Centrum universi. 2.) Aquarum sinus intra sinus terrae Collectio est Mare. 3.) A mari per subteraneos fluctus sunt amnes fontes & flumina in quibus ab ista percolatione amittitur Salido marina. 4.) Quamvis Terra gravior sit aqua et inferior tamen propter viventium commodum cavitatibus in ea factis aqua inter istas depressa et declusa est ex quibus oritur.

Q. 91. Quid est Elementatum?

R. Elementatum est quod factum est ex elementorum mistione unde mistum dicitur et elementatum.

Q. 92. Quid est Mistio?

R. Mistio est motus corporum minimorum contactum ut per multam actionem et passionem fiat unio.

Q. 93. Quomodo Elementa in mistione comminuuntur et commiscentur?

R. Elementa in mistione ita comminuuntur et commiscentur, ut minimae particulae . . .

the air commences at the position of collided bodies, and which is thereupon spread in the air to a certain distance in every direction. (3) It is divided into three regions, the highest, middle, and lowest. (4) It passes through the passages in bodies and fills them. (5) It is transparent and a diaphanous medium because of its tenuousness.

Q. 88. What is the element of water?

A. The element of water was composed of the thicker part of the primary mass and is the coldest, moist and heavy element, both encircling on all sides and flowing into the earth, more closely allied to air than to earth.

Q. 89. What is the element of earth?

A. The element of earth was composed from the thickest part of the primary mass, and is the driest element, cold, the thickest and immovable, and is the center of the world.

Q. 90. What is to be observed about the elements of water and earth?

A. (1) These two elements compose one globe and the center of the universe. (2) The gathering bodies of waters between bodies of earth is the sea. (3) From the sea through subterranean channels there are streams, springs, and rivers in which because of this filtering the salt of the sea is given off. (4) Although the earth is heavier than water and lower, nevertheless for the convenience of living creatures, water is sometimes forced down and shut into hollows made in the land, from which it rises.

Q. 91. What is a compound?

A. A compound is what is made out of the mixing of elements, whence it is called a mixture or something made of elements.

Q. 92. What is a mixture?

A. A mixture is the motion of the smallest bodies, so brought into contact that a union takes place because of the great amount of action and reaction.

Q. 93. How are the elements in a mixture broken up and intermingled?

A. The elements in a mixture are so broken up and intermingled, that the smallest particles . . .

[Manuscript incomplete.]

PART II

AN ENCYCLOPEDIA OF PHILOSOPHY

With an English Translation by H. W. S.

TECHNOLOGIA / SIVE / TECHNOMETRIA / Samuel Johnsonii / Liber Anno Domini 1714 / Aetatis meae 17 & 18 / Amicus Plato Amicus / Aristoteles sed magis amica veritas

ARS ENCYCLOPAIDIA / MANUALIS CEU PHILOSOPHIA / Cedant arma togae / Concedant laurea linguae

SYSTEMA / LIBER ARTIS / SAMUEL JOHNSONII / A. B. COLLEGII / GYMNASII / ACADEMICI-ALMAE MATRIS / CONNECTICUTENSIS / ANNO a CHRISTO PRO NOBIS INCARNATO / 1714 / et a MUNDO PER NUMEN CREATO / 5663 / Editio quarto longe correctior

DEDICATION OF JOHNSON'S ENCYCLOPEDIA

Sunt mihi libri duo Unus quinque constans foliis Cuique folio suae literae Liber hic est Mundus folia sunt caelum et quattuor elementa Coeli literae sunt ejus incolae Ignis seris aquae et terrae literae sunt eorum incolae Alter scil. S. S. Scriptura quae Oracula Divina praebet Hos libros noctesque diesque volvo adeoque omnes horas meas Iucundas et fructuosas in Colligendis omnis artis principiis reddo

S. J.

Priores editiones fuerunt dum fui Senior Sophista

Dignissimo
Clarissimo
Doctissimo
Spectatissimo
viro Magistro
Phinea Fisk

[Oh! dismal, intollerable,
an hundredth part of this
would be enough for him.]¹

Tutori quondam [loquacissimo] sagacissimo nunc ecclesiae

Haddamensis Pastori Reverendo

Hunc Libellum qualem (qui quum fuit a te tuoque sub conspectu coneretus tibi ideoque summum ut refugium fugit ut conservatur et perficietur) In Aeternum meae tibi observantiae omnibus meritis merita monumentum humilime dedicavi — Tui ego observantissimus e musaeo meo Idibus Mais Anno Domini 1714

S. J.

[N. B. When I was at College I was taught nothing but to be a conceited coxcomb like those that taught me. Indeed we had no books and our ignorance made us think almost out of our own brains as a certain Gent. (Mr. Noyes) of those times used to say was his way.]

LECTORI BENEVOLO

Nihil utilius, nihil dulcius, nihil excellentius (amice lector) quam sapientiam Sapientissimi atque Altissimi Numini in creaturis suis refulgentem, ac corruscantem, simul ac Benevolentiam suam ergo humanum genus in Verbo Divino Revelatam, in facie Charissimi Redemptoris nostri elucentem, intui, contemplari atque ad Praxim nostram applicare.

Hic ergo habes plerasque imo omnes regulas methodice dispositas, quibus astriones dirigas, in quodumque effectum nobile producendo. Hic habes Panarmonium in expressum qua omnia principia, omnesque regulae conennant in quodumque effectum perdignum efficiendo. Signa ideo tibi videatur aliquae mendae vel a recta ratione deviatio mihi adsis (amice) et eum sibi ita non est demonstrandum vel errorem consistente et agnoscente emendandum sum promptum.

Si quid denique bene tibi videatur appretiendi non mihi attribue, sed Deo opt. Max. benedic et eum laudata, adque secundum qui voluntatem Fide ac obedientia vive vale Tui Studissimi S. J. Datum a Guilfordensi Maii 6, 1714.

¹ The words in brackets were inserted by Johnson later in life when he reviewed this early work. [The Editors.]

PRAEFACIUM

Artem suos reflectere radios in intellectum, intelligentis creaturae ab antiquissimes, ideoque cum intelligente creatura reflexum suum habere ortum manifeste apparet etenim non tantum Hygiographiae verum etiam Hystoriae profanae ab unde testantur.

Omnis autem dubii maxime procul videtur quod illustrissima sapientia indutus fuit primus parens noster Adam ante lapsum cuius eo lapso scintillulae fuerunt relictæ. Non enim potest non esse quin cum tam longævam vitam vixerunt Patriarchae oportunitatem permultam in rerum structuram introspectendi habuerunt. Hinc maxime probabile videtur artem ceu sapientiam floruisse inter Patriarchas, scil. Adam, Seth, Enoch, Methusalem, Noah, et sic in eorum posteros propagatum et promulgatum esse. Inter quos floruerunt Abraham, Jobus, Isaack, Jacob, Josephus, Mosheh qui educatus fuit in omni sapientia Eegyptiorum (Act. 7, 22). Et plusquam probabile videtur quod ingressis in Terram Canaan Israeliticis Scholae erecta fuerunt quibus Praesides fuerunt ut fuerunt Eli, Samuel (1 Sam, 10, 10, 11, Cap. 19, 18v.) et Elijah, Elishah (2 Reg. 2 C 6) Dicti fuerunt — [Hebrew] — Discipuli dicti — [Hebrew] etc. Collegia, gymnasia ceu academiae apud Najoth in Ramah et Jerusalem. 1 Sam. 19. 18, 19; 2 Chron 34. 22 etc. [Hebrew] E quibus scholis multi fuerunt eximie docti quique viri et civiles et ecclesiastici. E Samueli schola floruit David cui successit Salomon ejus sapientiae maximae multum testantur hystoriae sacrae et profanae in toto enim terraris orbe fuit dispersa ita Josephus testatur. Ei successerunt multi ad captivitatem Babyloniam; e schola Elijae flouerunt Isaiah, Jeremiah et multi qui successerunt ad captivitatem. Postquam scholae iterum erectae fuerunt quibus praefuerunt Esdras, Nehemiah, etc. cui successor fuit Simon Justus cui Sochem cui Zadoc, cui Pbajethus. Hoc tempore floruit schola Essenorum qui dicuntur [Hebrew]. Succedunt multi doctores legis ut Hillel et Simeon qui succedit. Ille fuit qui

PREFACE

It is evident that art has reflected its rays into the intellect of intelligent creatures ever since the most ancient times, and that therefore it has its reflected origin in the intelligent creature, for not only hygiography but even secular history abundantly testify to this.

Accordingly it seems quite beyond any doubt that Adam, our first parent, was endowed with the most illustrious wisdom before the fall, and after the fall some little sparks of it remained. And the patriarchs, since they lived such long lives, must have had abundant opportunity to examine the structure of things. Hence it seems very probable that art or wisdom flourished among the patriarchs, viz. Adam, Seth, Enoch, Methusalah, Noah and was thus carried on and promulgated by their posterity; among whom flourished Abraham, Job, Isaac, Jacob, Joseph, Moses, who was educated in all the wisdom of the Egyptians (Acts. 7, 22). And it seems still more probable that the Israelites, after their entry into the land of Canaan, erected schools which had leaders, such as Eli, Samuel (1 Sam. 10; 10, 11. Ch. 19, v. 18) and Elijah, Elisha (2 Kings ch. 2, 6). They were called . . . [Hebrew] Their disciples were called . . . [Hebrew] etc. There were colleges, gymnasia, or academies at Najoth in Ramah and at Jerusalem. (1 Sam. 19; 18, 19. 2 Chron. 34, 22, etc.) . . . [Hebrew] From these schools came many extraordinary learned men both civil and ecclesiastical. From Samuel's school came David, who was succeeded by Solomon, to whose greatest wisdom many bear witness both in the sacred and profane histories; for it was known to the bounds of the earth, as Josephus testifies. He was succeeded by many up to the Babylonian captivity; from the School of Elijah there came Isaiah, Jeremiah and many who succeeded them up to the captivity. After it the schools were again erected, and were presided over by Ezra, Nehemiah, etc. and his successor was Simon Justus, and his, Sochem, and his, Zadoc, and his, Pbajethus. At his time there flourished the school of the Essenes, called in Hebrew . . . Many doctors of the law followed such as Hillel and Simeon who succeeded him. It was the latter who

Christum in ulnis amplectitur. Nunc quoque floruerunt Pharisei. Deinde anno m. 3949 natus est Christus qui scholas ingressus suam declaravit sapientiam (Luca. 2) Huic scholae praefuit Gamaliel Doctor Pauli doctori gentium.

A scholis et doctoribus Haebrais plusquam annos 500 ante Christum floruit philosophia eorum inter Graecos — primus fuit Pythagoras qui primus se ipsum philosophiam nominavit ut testantur hystoriae. Successit Socrate et Plato quibus succedit Aristoteles ille Peripateticus maximus qui fuit magister Alexandri magni, quibus successerunt multi docti quique viri in schola peripatetica. E Graecia in Italliam introducta fuit Philosophia fuit et inde in Germaniam Holandium Hiberniam, Galliam et Angliam. In hisce magis uno maximi viri fuerunt. Doctrina enim fuit Christiana. Inter los innumeros sectae principales fuerunt Platonici, Peripatetici, et Electici. Sectae Electicae princeps fuit Ramus ille magnus quem secutus $\kappa\alpha\tau\alpha\ \pi\omicron\delta\alpha\varsigma$ Richardsonus quem Amesius ille maximus quem nos. (Ex quibus omnibus enata est nova secta electiva scil. Neoterici.) ²

Sic vidimus verum si non fallunt Historici progressum ab ortu philosophiae ad hunc usque Diem. Et prout jamjam crevit ad huc in tantum molem faxit Deus Opt. Max. ut in dies magis magisque augeatur ad nomininis sui permagni Gloriam usque ad secundum Redemptoris gloriosi adventum. Amen (esto) (When I was a child, I spake as a child.) ³

² Added later. [The Editors.]

³ Added later. See note on p. 186. In the manuscript there follow five pages entitled *Harmonia Linguarum*, consisting of several propositions written in both Hebrew and Greek, which are not reproduced herewith. [The Editors.]

held Christ in his arms. At this time also flourished the Pharisees. Then, in the year 3949 Christ was born, and he went into the schools and made evident his wisdom (Luke 2). The head of this school was Gamaliel the teacher of Paul, the teacher of the Gentiles.

Besides the Hebrew schools and doctors, philosophy flourished more than 500 B. C. among the Greeks. The first was Pythagoras who first gave philosophy its name, as the histories tell us. He was succeeded by Socrates, and Plato, whom in turn Aristotle succeeded, the greatest of the peripatetics, the teacher of Alexander the Great; they were succeeded by many learned men all of the Peripatetic school.

From Greece philosophy was introduced into Italy and thence into Germany, Holland, Spain, France, and England. In these countries not a few of the greatest men were found; for their doctrine was Christian. Among these innumerable men the principal sects were Platonists, Peripatetics, and Eclectics. The leader of the eclectic sect was that great man, Ramus, at whose feet, as it were, there followed Richardson and then Ames, the greatest of them, followed him and we follow Ames. (From all these a new eclectic sect has sprung, *viz.*, the Neoterics.)

Thus we see if we are not mistaken, the true progress of history from the beginning of philosophy to this day. And as it has already grown to this huge extent so may the great and good God grant that in this day it may grow more and more to the glory of his great name, even unto the second coming of our glorious Redeemer. Amen.

TECHNOLOGIA
CEU
TECHNOMETRIA

1. Ars est idea eupraxiam repraesentans et dirigens.
 2. Idea est materia artis.
 3. Idea est exemplar rei.
 4. Idea est repraesentare et repraesentando dirigere eupraxiam in agendo.
 5. In quibus forma artis ponitur.
 6. Objectum et finis ideae est eupraxia.
 7. Objectum est quatenus circa eam repraesentando versatur;
 8. Finis quatenus eam repraesentando dirigit.
 9. Eupraxia est regularis agentis in agendo motus seu actio.
 10. Eupraxiae considerandum est efficiens, objectum, effectum et partes.
 11. Efficiens est agens quod secundum ideam effectum producit.
 12. Objectum est materia circa quam efficiens et ejus eupraxia versantur in agenda — est que materia ex qua.
 13. Effectum quod ab agente et ejus eupraxia secundum ideam producit est euprassomenon — quod est utriusque opus relictum.
 14. Partes seu membra eupraxiae sunt duae — genesis et analysis.
 15. Genesis est progressus regularis a simplicibus ad composita haec ex illis consistendo.
 16. Analysis est regressus regularis a compositis ad simplicia illa in haec resolvendo.
 17. Ubi definit genesis ibi incipit analysis atque hac ars habet omnia generalia.
- Sic videmus quattuor requisita ad quodumque euprassomenon necessaria:

TECHNOLOGY OR TECHNOMETRY

1. Art is the idea representing and directing *eupraxia* [well-doing].
2. An idea is the matter of art.
3. An idea is the pattern of a thing.
4. An idea is representing and by means of the representation directing *eupraxia* in action.
5. On which the form of art is based.
6. The object and end of an idea is *eupraxia*.
7. A thing is an object in so far as it is engaged in being represented;
8. An end, in so far as it directs by means of representing.
9. *Eupraxia* is the orderly procedure or action of an agent in acting.
10. We have to consider the effective agent, object, effect and parts of *eupraxia*.
11. An action is an effective agent when it produces an effect consequent on an idea.
12. An object is the material about which an effective agent and its *eupraxia* are concerned in practice — and is also the material out of which it proceeds.
13. The effect which is produced by the agent and his *eupraxia* according to an idea is a *euprassomenon* — which is on the other hand the deed done.
14. The parts or factors of *eupraxia* are two — generation and analysis.
15. Generation is a regular advance from simples to the composites which they compose.
16. Analysis is an orderly regress from the composites to the simples into which they can be resolved.
17. Where generation ends analysis begins, and this holds good for all *generalia*.

Thus we see that there are four things necessary for any *euprassomenon*:

- (1) Artem seu ideam scil. — repraesentantem atque dirigentem.
- (2) Agentem qui secundum ideam operatur.
- (3) Actionem bonam repraesentatam et directam.
- (4) Aliquid circa quod haec actio versetur et quod sit materia ex qua agens secundum ideam actione producat effectum.

Finis

Generalia haec competunt arti archetypae analogicae.
Haectenus ars fuit in genere sequitur ars in specie.

18. Est que archetypa vel typica.
19. Ut enim ens est primum vel a primo ita ars est vel entis primi vel entis a primo.
20. Ars archetypa est ars eupraxiae divinae vel fusius,
21. Ars archetypa est idea rerum decretarum in Mente Divina quae repraesentat et inde dirigit eupraxiam Diviniam.
22. Idea divina est unica sed
23. Idea divina est perfectio divina illa simplicissima quae dici potest varia quatenus est imitabiles a variis creaturis.
24. Hic ars et eupraxia etiam est unica simplicissima ac perfectissima.
25. Objectum eius est eupraxia divina dicitur analogice.
26. Eupraxia divina est actio Dei in creando, conservando et gubernando creaturas.
27. Eius consideranda sunt efficiens, partes objectum et effectum.
28. Efficiens est Deus opt. max. qui est ens absolute primum.
29. Quamvis haec eupraxia est actus unicus tamen est virtute multiplex ut terminatur in creaturas.
30. Estque creatio vel providentia.
31. Creatio est ex nihilo creaturarum productio.
32. Estque vel immediata ceu ex nihillo.
33. Providentia est creaturam et conservatio et gubernatio.
34. Objectum creationis immediata non praesupponitur sed ponitur.

- (1) An art or idea, namely something representing and directing it.
- (2) An action which is done consequent upon an idea.
- (3) A good deed represented and directed.
- (4) Something about which this deed is concerned and which may be the material out of which the action produces the effect consequent on the idea.

End

Generalia in this art correspond to analogical archetypes.

So far we have considered art in relation to its genus. In what follows it is considered in relation to its species.

18. Art is archetypal or typal.
19. For as a being is either primary or derived from a primary being, so art belongs either to primary being or to being derived from primary being.
20. The archetypal art is the art of the divine *eupraxia*, or more fully,
21. The archetypal art is the idea of the things decreed in the divine mind which represents and hence directs the divine *eupraxia*.
22. The divine idea is unitary, but
23. The divine idea is divine perfection, the simplest imaginable — manifold in so far as it can be imitated by various creatures.
24. This art and *eupraxia* is therefore unitary, the simplest and most perfect.
25. Its object is divine *eupraxia* analogically speaking.
26. The divine *eupraxia* is the act of God in creating, preserving and governing his creatures.
27. We must consider its active agency, parts, object, and effect.
28. God most good and great is an active agent, being absolutely primary being.
29. Although this *eupraxia* is a unitary act yet it is manifold in its power since it terminates in his creatures.
30. And is either creation or providence.
31. Creation is the production of creatures out of nothing.
32. And it is immediate or (in other words) out of nothing.
33. Providence is both the preservation and governing of creatures.
34. The object of immediate creation is not presupposed but posited.

35. Objectum creationis mediatae est materia inhabilis.
36. Objectum providentiae est creatura.
37. Effectum seu euprattomenon est creatura tam creata quam conservata ac gubernata.

Vidit Deus quicquid fecit ecce valde bonum erat.

Things are God's words in print.

Finis Archetypae

38. Haectenus archetypa sequitur typica tractanda.
- Ars typica est ars quae est umbracula artis archetypae.
39. Quamvis ars eupraxia et efficiens fuit Deo unica tamen creaturis quasi ex refractione radiorum et ars eupraxia, eius efficiens, objectum et effectum multiplicia evadunt. Igitur,
40. Secundum duplicem considerationem distribuitur e subjectis in Entypam et Ectypam.
41. Ars entypa est typica — fabricae creaturae impressa.
42. Subjectum eius igitur est creatura quam concipimus esse concretam et divisibilem.
43. Duae igitur sunt eius proprietates concretio et abstractio.
44. Concretio est proprietas qua euprattomena omnia a nobis concepta esse varia in unum conglutinantur.
45. Abstractio est qua utrumque euprattomenon ad propriam suam eupraxiam speculatione reducitur.
46. Per istam abstractionem apparent artes singulae circa vel in ente a primo refulgentes,
47. Nam primo circa ens a primo circumspicientes imprimis videmus illud habere relationes rationes ceu affectiones ideoque esse ratiocinatum. Hinc eupraxia et regulae ratiocinandi.
48. Deinde videmus illud habere appellationes tam puras quam ornatas ideoque tam pure quam ornate esse appellatam. Hinc eupraxia et regulae loquendi et ornandi loquelam.
49. Quae utraque ab affectionibus rerum radicaliter emanant.
50. Secundo in ens a primo introspectientes videmus illud habere quantitatem, qualitatem, bonitatem.

35. The object of mediate creation is rough matter (raw material).
36. The object of providence is the creature.
37. The effect or *euprattomenon* is the creature both as a thing created and as preserved and governed.

God saw what he had made and behold it was very good.
Things are God's words in print.

End of Section on Archetypes

38. So far we have considered the archetype; in the following we must treat of types.

A typical art is an art which is the mere shadow of the archetypal art.

39. Although the art of *eupraxia* and efficacy was unitary in respect of God, yet in respect of his creatures, as if by a refraction of rays, the art of *eupraxia*, its efficacy, objects and effect all proceed in a manifold manner. Therefore,

40. A second two-fold sub-classification must be made into entype and ectype.

41. An entypal art is a type of art impressed upon the creature when made.

42. Its subject is therefore the creature whom we conceive to be concrete and divisible.

43. It has therefore two properties — concretion and abstraction.

44. Concretion is the property by which all *euprattomena*, conceived by us to be various, are cemented into one.

45. Abstraction is [the property] by which each *euprattomenon* is referred by observation to its own *eupraxia*.

46. By this same [property of] abstraction there are made apparent the single arts [or traits] residing in or about primary being,

47. For as soon as we observe primary being in its relations we see first of all that it possesses relations, reasons and qualities and is, therefore, intelligible. Hence *eupraxia* and the rules of reasoning.

48. Then we see that it has names either pure or embellished and hence it is named either purely or ornamentally. Hence the *eupraxia* and rules of speech and of embellishing language.

49. Both of which emanate fundamentally from the qualities of things.

50. But when we examine into the very nature of primary being we see that it possesses quantity, quality, value.

51. Videntes illud habere quantitatem, videmus eam esse discretam et numeratam. Hinc eupraxia et regulae numerandi.
52. Vel continuam et mensuratam. Hinc eupraxia et regulae mensurandi.
53. Videntes illud habere qualitatem videmus esse naturam naturatam. Hinc eupraxia et regulae naturandi.
54. Videntes illud habere bonitatem videmus esse bonum trahens finem esse in gloriam Dei Creatoris opt. max. factum. Hinc eupraxia et regulae vivendi.
55. Illas regulas vocamus entypas et sunt idearum et definitiones et distributiones.

Finis.

Haectenus ars entypa sequitur ars ectypa tractanda

56. Ars ectypa est typica regulis catholicis methodice delineata.
57. Cuius consideranda sunt regulae catholicae, methodus, species.
58. Regulae catholicae colliguntur e rebus ope sensus, observationis, inductionis et experientiae.
59. Fiunt secundum leges — (κάτα πάντος, καθ'αὐτὸ et καθολοπρωτον) — verissimae, justissimae ac sapientissimae.
60. Pariunt in mente tres habitus scil. intelligentiam, scientiam, et sapientiam.
61. Hisce concomitant canones ceu maximae.
62. Methodus debet fieri juxta legem methodi.
63. Ita facta habitus prudentiae inde expurgit.
64. Species distinguuntur per usum in generales et speciales quoad usum.
65. Generales magis vel minus.
66. Magis tales generalis est *Logica*.
67. Logica est ars ectypa bene ratiocinandi con arguendi.
68. Objectum eius est eupraxia rationis.
69. Eupraxia rationis est motus regularis ratiocinantis in argumento — intendo ad arguendum arguendum.
70. Explicatur ab instrumento arguetatis, scil. argumento et arguendo et regulis arguendi.
71. Hinc membra logicae sunt duae, inventio et dispositio.

51. When we see that it possesses quantity we see that it is discrete and numbered (hence the *eupraxia* and rules of numbering);
52. Or continuous and measured (hence the *eupraxia* and rules of measuring).
53. When we see that it possesses quality we see that it is *natura naturata*. Hence the *eupraxia* and rules of [defining the] natures [of things].
54. When we see it has value we see it leading to a good end, to be made to the glory of the most great and good God, the Creator. Hence the *eupraxia* and rules of living.
55. All these rules we call entypes and they consist of ideas, definitions and classifications.

End.

So much for entypal art. Now follows a discussion of ectypal art.

56. Ectypal art is a type methodically constructed by universal rules.
57. We must consider its universal rules, method and species.
58. The universal rules are gathered from things by means of the senses, observations, inductions, and experience.
59. Then there are the laws (κατὰ πάντος, καθ'αὐτὸ et καθ'ὅλω πρῶτον) of the most true, the most just and most wise.
60. They produce in the mind three states, *viz.*, intelligence, knowledge, and wisdom.
61. These are accompanied by canons and maxims.
62. Method should be put next to the law of method.
63. This done, the state of prudence results.
64. Species are distinguished by use into generals and specials according to their use.
65. Generals are more or less so.
66. Most general is *logic*.
67. Logic is the ectypal art of reasoning and arguing well.
68. Its object is the *eupraxia* of reason.
69. The *eupraxia* of reason is a regular course of reasoning in argument—to be used in arguing something debatable.
70. It is explained by means of proof, *viz.*, argument, the thing to be argued, and the rules of arguing.
71. Hence the parts of logic are two—invention and arrangement.

72. Inventio est prima pars logicae de inveniendis argumentis et arguendis.
73. Argumentum est quod ad aliquid arguendum aspectum est.
74. Arguendum est quicquid proponitur ut arguatur quae coincidunt.
75. Sunt artificialia vel inartificialia.
76. Artificialia in ipso artificio rei inveniuntur et arguunt ex sese.
77. Suntque prima vel orta.
78. Prima sunt artificialia quae primitur afficiuntur ad arguendum et quorum affectio est in se et a se.
79. Suntque absoluta vel comparata.
80. Absoluta sunt prima simpliciter absolute considerata.
81. Suntque consentanea vel dissentanea.
82. Consentanea sunt absoluta inter se consentientia.
83. Suntque absolute vel modo quodam talia.
84. Absolute consentanea sunt quorum alterum ab alterio . . . [?]
quoad esse.
85. Suntque causa vel causatum.
86. Causa est absolute consentaneum ejus vi causatum est.
87. Estque externa vel interna.
88. Externa est qua afficit ad extra ut efficiens.
89. Efficiens est causa externa a qua effectum est.
90. Eius modi tres sunt:
91. Primo est procreans vel conservans.
92. Procreans dat effectum esse ut pater filium.
93. Conservans dat effectum porro esse ut nutrix.
94. Secundo efficiens est sola vel cum aliis.
95. Sola solitario operatur vel absolute ut Deus, vel secundum quid ut homo.
96. Efficientes cum alii sunt pares vel impares.

72. Invention is the first part of logic, concerning the arguments to be brought in and argued.
73. An argument is whatever bears upon a point at issue.
74. A point at issue is anything proposed in order that it may be proved which [points] agree.
75. They conform to the rules of the art or they do not.
76. Those which conform to the rules are introduced into the structure of the argument itself and argue by their own force.
77. And these are primary or derivative.
78. The primary are those which primarily affect the argument and whose effect on the argument is inherent in themselves and on their own account.
79. And they are absolute or comparative.
80. Absolutes are primary considerations considered absolutely and simply.
81. And they are consistent or contradictory.
82. Consistent propositions are absolute statements mutually consistent.
83. And they are so absolutely or only in a measure.
84. Absolutely consistent are those which are . . . [?] entirely mutually dependent on each other.
85. And they are cause or caused.
86. A cause is one which is absolutely in agreement with that by force of which it is caused.
87. And [a cause] is external or internal.
88. An external [cause] is one which affects another in the manner of an effective agent.
89. An effective agent is an external cause by which an effect is made.
90. Of this there are three modes:
91. The first is either creating or preserving.
92. Creating gives being to the effect as a father to his son.
93. Preserving enables the effect to prosper; as [*e.g.*] a nurse.
94. A second mode of effective agency is either alone or with others.
95. A sole cause works independently, either absolutely as God does, or in a secondary manner, as man.
96. Effective causes working together with others are either equal or unequal.

97. Pares sunt efficientes equalium virium ut bores ad currum dicuntur concausae.
98. Impares contra suntque principalior vel minus principalis.
99. Principalior est quae majorem, caeteris vim confert, ut dux in bello.
100. Minus principales sunt impulsivae vel adjuvantes.
101. Impulsivae movent vel urgent principalem ad agendum.
102. Suntque externa ut procataretica vel interna.
103. Procataretica est quae movet ad extra et donum oblatum accipere.
104. Interna movet ad intra.
105. Estque proegumena vel finis.
106. Proegumena movet ad intra sine respectu alicuius boni ut ira in animalia.
107. Finis urget propter bonitatem aliquam praevisam cuius gratia effectum est producturum ut bonitas vel convenientia donum provocit.
108. Estque alius cuius alius cui alius operis alius operantis, etc.
109. Adjuvans dirigitur a principali.
110. Estque ministra vel instrumentum.
111. Ministra dirigitur circa interno principio motiones ut servus.
112. Instrumentum dirigitur sine interno principio motiones ut securis.
113. Tertio efficiens efficit per se vel accidens.
114. Efficiens per se sua facultate efficit vel natura ut ignis urit vel consilio.
115. Efficiens per accidens extra facultatem efficit vel necessitate coacta vel praeter scopum.
116. Causa interna est quae ingreditur et constituit essentiam.
117. Estque materia vel forma.
118. Materia est causa interna ex qua materiatur ut lignum ex qua domus.

97. Equal causes are the coöperations of equal forces, like oxen at a cart. They are called joint causes.
98. Unequal causes on the contrary are those which are either major or minor.
99. A major cause is one which exerts greater power than the others, as a general in battle.
100. Minor causes are either impulsive or auxiliary.
101. Impulsive causes move or urge the principal agent into action.
102. And these are either external (as a *procataretica*) or internal.
103. A *procataretica* is a cause which moves someone toward something external; as to accept a proffered gift.
104. An internal impulse moves in an internal direction.
105. And it is either a blind push or an end.
106. A blind push moves inwardly without respect to any good; as [*e.g.*] anger in animals.
107. An end urges toward some foreseen good on account of which the effect is to be produced; as benevolence or good pleasure prompts a gift.
108. And one [end] operates by the means of the operation of another, and this in turn of another, etc.
109. An auxiliary cause is directed by the principal.
110. It is either ministrant or an instrument.
111. A ministrant cause is directed to its movements by an internal principle, as a servant.
112. An instrument is directed to its movements without an internal principle, as an axe.
113. The third mode of effective agency is either intrinsic or accidental.
114. Intrinsic agency works by its own power either by nature as fire burns or by design.
115. Accidental agency works by means of external forces, either by the coercion of necessity or in that it acts outside its own objective.
116. An internal cause is one which enters upon and constitutes being.
117. And it is either material or form.
118. Material is the internal cause out of which a thing is constructed, as wood [is the material] out of which a house [is made].

119. Forma est causa interna per qua formatum est id quod est et a caeteris rebus distinguitur.
120. Causatum est absolute consentaneum quod e causis existit.
121. Eius gradus sunt motus ut procreatio vel res motu facta ut res procreata.
122. Estque et effectum et materiam formatum in uno.
123. Modoquodam consentanea sunt quorum alterum ab alterius pendet quoad bene esse.
124. Estque subjectum vel adjunctio
125. Subjectum est modo quodam consentaneum cui aliquid adjungitur.
126. Estque recipiens vel occupans.
127. Recipiens adjunctum in vel ad se recipit ut homo doctrinam vel vestes.
128. Occupatum est circa quod adjunctum occupatur vel versatur. Idem est objectum.
129. Adjunctum est modoquodam consentaneum cui aliquid subjicitur.
130. Estque receptum vel occupatum.
131. Receptum recipitur in vel ad subjectum.
132. Occupatum ab adsubjectis occupatur.
133. Ad huc consentanea nunc dissentanea quae sunt absoluta inter se dissentientia.
134. Dissentio autem omnis est causis, causatis, subjectis vel adjunctis.
135. Dissentanea sunt aequae nota.
136. Juxta se posita magis elucescunt.
137. Suntque diversa vel opposita.
138. Diversa sunt dissentanea quae sola ratione dissentiunt, i. e., in certis quo potuissent consensisse ut Petrus et Paulus in doctrina.
139. Opposita sunt dissentanea quae ratione et re dissentiunt ideoque non potuissent consensisse.
140. Suntque disparata vel contraria.

119. The form is the internal cause by which a thing is formed to be what it is, and is distinguished from other things.
120. A thing caused is in absolute agreement when it ensues upon its causes.
121. Its stages are the movement, as an act of creation and the thing made by the movement, as a thing created.
122. And this is both the effect and the material formed into one.
123. Things are partly in agreement when one depends on another for its well being.
124. And in this case there is either a subject or an adjunct.
125. A subject is a thing somewhat in agreement [with others], to which something is added.
126. It consists either in receiving a thing or being occupied with it.
127. Receiving an addition takes place either in the case of receiving to itself, as a man [receives] a doctrine or clothes.
128. A thing occupied is that with which the added thing is occupied or engaged. It is the same as the object.
129. An adjunct is something to a certain extent in agreement, to which something is subjected.
130. It is either received or occupied.
131. What is received is received in or to the subject.
132. The thing occupied is occupied by those to which it is subjected.
133. So far [we have considered] agreements, now [we turn] to the disagreements, those which are absolutely disconnected in respect of each other.
134. Disagreement however is always between causes, things caused, subjects or adjuncts.
135. Disagreements are equally known.
136. When placed in juxtaposition more light is thrown on them.
137. They are either different or opposed.
138. Different are those things which disagree only on one ground, *i. e.*, in certain things they might be able to agree, as Peter and Paul about doctrine.
139. Opposites are disagreements which conflict both in reason and in fact, and therefore they could not possibly agree.
140. And these are either disparate or contrary.

141. Disparata sunt opposita quorum unum multis eadem ratione opponitur ut homo lapis, arbor in respectu usus.
142. Contraria sunt opposita quorum unum uni tantum opponitur.
143. Suntque affirmantia vel negantia.
144. Contraria affirmantia sunt contraria positiva, et.
145. Sunt relata vel adversa.
146. Relata sunt affirmantia quae mutua relatione contrariantur ut paternitas et filiatas in causa conservante.
147. Adversa sunt affirmantia quae contrariantur in tertio a se ut homo et bestia in animali.
148. Contraria negantia sunt quorum alterum est negativum. Hoc negativus est topica.
149. Suntque contradicentia vel privantia.
150. Contradicentia sunt quorum alterum negat ubique, ut homo, non homo.
151. Privantia sunt quorum negatio negat in eo tantum subjecto quo affirmatum est ut habitus et privatio.
152. Ad huc absolute sequuntur comparata quae sunt prima inter se collata.
153. Comparata nunc contracte nunc explicate propositione et redditone traduntur,
154. Hic etiam fictum arguet alterum verum.
155. Comparatio est vel causarum, causatorum, subjectorum, vel adjunctorum, vel quantitate, vel qualitate.
156. Comparata in quantitate dicuntur quanta.
157. Suntque paria vel imparia.
158. Paria sunt in quantitate comparata quorum quantitas est aequalis, ut Petrus et Paulus in pietate.
159. Imparia sunt quorum quantitas est inaequalis.
160. Suntque maiora vel minora.
161. Majus est cuius quantitas excedit.
162. Minus est cuius quantitas exceditur, ut Solomon excedit Rehoboam in sapientia.
163. Comparata in qualitate dicuntur quales.
164. Suntque similia vel dissimilia.

141. Disparates are opposites one of which differs from many on the same ground; as man, stone, tree in respect of use.
142. Contraries are opposites one of which is opposed in this way to one only.
143. And these are affirming or negating.
144. Affirming contraries are positive contraries, and
145. Are related or opposed.
146. Related [contraries] are those affirming [contraries] which are contrary in respect of a mutual relation; as paternity and sonship in the matter of protection.
147. Opposed [contraries] are those affirming [contraries] which differ in a third; as man and beast in respect of animal.
148. Contraries, one of which is a negative of the other, are negating. This negative is the *topica*.
149. And these are either contradictories or privatives.
150. Contradictories are those one of which denies the other entirely; as man, not-man.
151. Privatives are those the denial of which denies as much in the subject as is affirmed; as [*e. g.*] a "positive state" and a "privation."
152. So far [we have considered things] absolutely, [now] follows [a discussion of] comparatives, [and] first, of those which are inter-related.
153. Comparatives are studied by propounding and re-wording them sometimes in a contrasted, sometimes in an expanded form,
154. For one being false proves the other true.
155. Comparison takes place either between causes, things caused, subjects, or adjuncts, or in respect of quantity or quality.
156. Things compared in respect of quantity are called quantities.
157. And they are equal or unequal.
158. Equals are those comparatives whose quantity is equal; as Peter and Paul in respect of piety.
159. Unequals are those whose quantity is unequal.
160. And these are greater or less.
161. The greater is the one whose quantity is surpassing.
162. The less is the one whose quantity is surpassed; as Solomon surpassed Rehoboam in wisdom.
163. Comparatives in respect of quality are called qualities.
164. And these are similar or dissimilar.

165. Similia sunt comparata quorum qualitas est eadem, ut Adam et Solomon in sapientia.
166. Similitudo cum explicatur est disjuncta, vel continua.
167. Similitudo disjuncta est cum quatuor termini se ipsa distinguuntur ubi ut primus ad secundum sic tertius ad quartum, ut sic carmen ad auditorem ut sopor ad fessum.
168. Similitudo continua est ubi tres termini et quatuor ratione distinguuntur ubi ut primus ad secundum sic secundus ad tertium, ut lex magistratui sic magistratus populo.
169. Dissimilia sunt quorum qualitas adversa, ut Petrus et Judas.
170. Haec tenus Prima orta sequuntur orta sunt artificialia quae affectionem secundariam habuerunt in se sed non a se a primo.
171. Suntque symbola primorum.
172. Suntque nominalia vel realia.
173. Nominalia sunt orta simplicia.
174. Suntque conjugata vel notatio.
175. Conjugata sunt nominalia quorum nomina sunt sub eadem principio cognata.
176. Suntque abstractum, concretum et modus agendi inde fluens.
177. Abstractum est forma concreti ut iustitia est iusti, i. e. per quam iustus est iustus.
178. Concretum est cuiusvis rei conceptus inadaequatus ut iustus Petri.
179. Modus agendi est actio fluens — ut ex iustitia in iusto ut iuste agere.
180. Notatio est nominale quo ratio redditur cur talis res tali nomine designetur, ut cadaver dicitur quia caro dato vermibus.
181. Realia sunt orta composita.
182. Hic semper affectio reciprocationis est.
183. Reciprocatio est cum alterum de altero praedicatur.
184. Suntque distributionis et definitionis.
185. Distributio est qua totum in partes distribuitur hinc illae sunt argumenta.

165. Similar are comparatives whose quality is the same; as Adam and Solomon in respect of wisdom.

166. When similarity is analyzed it is [found to be] discrete or continuous.

167. Similarity is discrete when the four terms can be so distinguished that the first is to the second as the third is to the fourth; for example, as the song is to the hearer so sleep is to the weary.

168. Similarity is continuous when three terms out of four are distinguished in such a way that the first is to the second as the second is to third; for example, as the law is to the magistrate so is the magistrate to the people.

169. Dissimilar are things of opposed quality, as Peter and Judas.

170. So far [we have discussed] comparatives which are primary in origin, now follows [a discussion] of those which have an artificial origin in some secondary aspect which they have, but not of themselves as primary [attributes].

171. And these are symbols of the primary ones.

172. And they are nominal or real.

173. Nominals are simple in origin.

174. And are either conjoined or notational.

175. Conjoined nominals are those whose names are known by the same principle.

176. And are abstract (or) concrete and their manner of acting hence free.

177. The abstract is the form of the concrete, as justice is of the just, *i. e.*, that because of which the just is just.

178. The concrete is an inadequate conception of anything; as "just" [said] of Peter.

179. The manner of acting is a free act as from justice [we pass] to the just in order to act justly.

180. A notation is a nominal by which a reason is given for such a thing being called by such a name; as *cadaver* is so called because of *caro* (flesh) *dato* (given) *vermibus* (to worms).

181. Reals are compound in origin.

182. Here the affect is always [in the form] of a reciprocation.

183. A reciprocation is when one thing is predicated of the other.

184. And these are distributions and definitions.

185. Distribution consists in distributing a whole into its parts. Hence they are its reasons [grounds].

186. Totum est quod continet partes
187. Pars est quae continetur in toto.
188. Optima distributio est Dichotoma quae est ex partium cum toto consentione maxima et inter se dissentione, hinc optima.
189. Distributio est ex absolute vel modo quodam consentaneis.
190. Ex vel absolute consentaneis est vel ex causis vel causatis.
191. Distributio et causis est cum partes sunt symbola causarum totius.
192. Estque imperfecta vel perfecta.
193. Imperfecta est ab efficiente vel materia vel forma.
194. Distributio ab efficiente imperfecta est cum partes distinguuntur per efficientes ut Sacra Scriptura distribuitur in Prophetas, Evangelistas et Apostolas; Testimonium in Div. et hum.
195. Distributio e materia est cum partes distinguuntur per materias, ut statuæ aliae aureae aliae ferreae, etc.
196. Distributio e formis est cum partes distinguuntur per formas ut statuæ aliae humanae aliae belluinae.
197. Distributio e causis perfecta est causis essentialibus conjunctis.
198. Estque integri in membra.
199. Integrum est totum cui partes sunt essentielles.
200. Membrum est pars integri scil. illo essenziale et confert partem materiae et partem formae, ut hominis partes sunt corpus et anima.
201. Distributio ex causatis est cum partes sunt symbola causatorum totius.
202. Estque imperfecta vel perfecta.
203. Imperfecta est ab effecto materiato vel formato.
204. Distributio ex effectis est cum partes distinguuntur per effecta ut in nave nautae alii malos scandunt alii per foros cursitant alius tenet clavem in puppi quae sunt effecta singulorum etc.

186. The whole is what contains parts.
187. A part is what is contained in the whole.
188. The best distribution is dichotomy which is [based] on the greatest agreement between parts and whole and [the greatest] differentiation between the [parts]. Hence the best.
189. Distribution is either absolute or to a certain extent based on concurrent circumstances.
190. Whether absolute or based on concurrent circumstances, it is based on causes or on what is caused.
191. Distribution by causes is when the parts are symbols of the causes of the whole.
192. And it is either imperfect or perfect.
193. It is imperfect when based on the effective agent, either the material or form.
194. Distribution based on an effective agent, which is imperfect, is when the parts are distinguished by their effective agents; as Sacred Scripture divided into Prophets, Evangelists, and Apostles; [or] evidence divided into divine and human.
195. Distribution based on the material is when the parts are distinguished by their materials; as statues into some golden, some iron, etc.
196. Distribution based on the forms is when the parts are distinguished by their forms; as statues, some human, others animal.
197. Distribution based on the causes, which is perfect, consists of a coördination of the essential causes.
198. And this is [dividing] the complete wholes into their members.
199. A complete whole is the totality whose parts are essentials.
200. A member is a part of a complete whole, *viz.*, essential to it, and assigns part to matter and part to form; as the parts of man are body and soul.
201. Distribution based on the things caused is when the parts are symbols of the things caused by the whole.
202. And it is either imperfect or perfect.
203. The imperfect (kind) is based on the effects arising either out of the material or the form.
204. Distribution on the basis of effects is when the parts are distinguished by the effects; as on a ship some sailors climb the masts, some run about the gangways, another holds the rudder on the stern, which are affects of each singly, etc.

205. Distributio e materiato est cum partes distinguuntur per materiata ut aureum aliud statuæ aliud anuli, etc.
206. Distributio e formato est cum partes distinguuntur per formata ut forma alia est mensæ alia cathedræ etc.
207. Distributio e causatis perfecta est e causatis causarum essentialium conjunctio.
208. Estque generis in species et hic partes subjective continentur.
209. Genus est totum partibus essentialia estque generalissimum vel subalternum.
210. Genus generalissimum nullum genus supra se habet ut ars et ens.
211. Genus subalternum est quod illius species hujus autem genus est ut homo respectu animalis et Petri.
212. Species est pars generis seu quod a genere est essentiata et illo subjicitur.
213. Estque subalterna vel specialissima.
214. Species subalterna idem est quod genus subalternum.
215. Species specialissima est quæ est individua in alia species sub se conuales est ipsa ut Petrus.
216. Genus est proprium vel analogium.
217. Proprium est quod speciebus proprie et vere est essentialia.
218. Analogum est quod tantum analogice est speciebus essentialia ut homo est verus vel fictus.
- (Sic quoque species)
219. Distributio e modo quodam consentaneis est e subjectis et adjunctis.
220. Distributio e subjectis est cum partes distinguuntur per subjectis ut homines vel sunt Asiae Africae Europæ vel Americae.
221. Distributio ex adjunctis est cum partes distinguuntur per adjuncta ut homines sani vel aegri.
222. Distributio fuit. Definitio est reale quo explicatur quid res sit.

205. Distribution based on the [effects] arising out of the material is when the parts are distinguished by the material out of which they are made; as some gold is [made] into a statue, some into a ring, etc.
206. Distribution based on the effects arising out of the forms is when the parts are distinguished by what is formed; as one form is of a table, another of a desk, etc.
207. A perfect distribution based on the things caused is a co-ordination based on the things caused by the essential causes.
208. And this [takes place] from genus into species, and these parts are contained [in the whole] as one subject in another.
209. The genus is the whole essential to the parts and is either the most general or sub-ordinated.
210. A most general genus is one which has none above it; as art and being.
211. A subordinate genus is one which is a species of one [class] and a genus of another; as man [is] in respect of animal and of Peter.
212. A species is a part of a genus or that which is taken from the genus as essential and subordinated to it.
213. And is either subordinate or the lowest species.
214. A subordinate species is the same as a subordinate genus.
215. The lowest species is one which is undivided into any species under it as it is itself; as Peter.
216. A genus is proper or analogical.
217. A proper [genus] is one whose species are properly and truly essential.
218. An analogical [genus] is one in which the whole is analogical to the essential species; as man is either real or fictitious.
(The same is true of species)
219. Distribution on the basis of things somewhat in agreement is either by substantives or attributes.
220. Distribution based on substantives is when the parts are distinguished by substantives; as men are either of Asia, Africa, Europe or America.
221. Distribution based on attributes is when the parts are distinguished by attributes; as men, well or sick.
222. So much for distribution. Definition is the means by which is explained what a thing really is.

223. Estque perfecta vel imperfecta seu descriptio.
224. Definitio perfecta est cum explicatur quid res sit causis essentialibus ut definitio artis nostra.
225. Descriptus est cum explicatur ex aliis quibuscumque argumentis. Sic conceptus mentis de quocumque subjecto explicatur au breviter au circum circa in circulantione.
226. Hic definitio est res explicata et definitio est res complicata.
227. Haec de artificialibus sequuntur inartificialia. Inartificialia sunt non sua sed assumpta artificialii alicujus re' arguunt.
228. Suntque testis vel Testimonium ac Testatum.
229. Testis est Inartificiale quod est author testimonii.
230. Cui adesse debent virtus prudentia, benevolentia et cognitio.
231. Divinus est author testimonii divini ut Deus.
232. Humanus est author humanis ut homo.
233. Testimonium est inartificiale quod fertur de re testata a teste.
234. Estque divinum vel humanum.
235. Divinum divini testimonii author est ut S. S. Scriptura.
236. Humanum humani testimonii author est, ut lex, etc.
- Atque haec sunt capita quae dicuntur topica duodicem idearum quibusdam.
237. Haecenus de argumentorum inventionem sequitur eorum dispositio.
238. Dispositio est secunda pars logicae seu dialecticae de disponendis argumentis cum arguendis ut conspicua sit relatio alterius ad alterum.
239. Estque regula ratiocinandi seu arguendi.
240. Estque in iudicium vel memoriam.
241. In iudicium est axioma vel syllogismus.
242. Axioma est in iudicium dispositio argumenti cum arguendo ad illustrandum.
243. Axiomatia sunt consideranda causae et affectiones et species.
244. Causae ejus sunt materia et forma.

223. And [definition] is either perfect or imperfect, *i.e.*, a description.
 224. A perfect definition is when there is an explanation of what a thing is in terms of its essential causes; as our definition of art.
 225. A description is when there is an explanation on any other grounds. In this way concepts of the mind on any subject are explained whether briefly or by circumlocution.
 226. Thus, definition is a thing explained (unfolded) and the term defined is a thing with its connotations developed (folded up).
 227. So much concerning artificial [arguments], now follow unartificial. Unartificial [arguments] are those which explain not by their own force but by the assumed force of something artificial.
 228. These are either witness or testimony and things witnessed.
 229. A witness is an unartificial [argument] who is the author of testimony.
 230. Such a person must have virtue, prudence, benevolence and knowledge.
 231. The author of divine testimony is divine, as God.
 232. The author of human testimony is human, as man.
 233. Testimony is the unartificial [argument] which is brought to bear on the thing witnessed by the witness.
 234. And it is divine or human.
 235. The author of divine testimony is divine; as the Holy Scriptures.
 236. The author of human testimony is human; as the law, etc.
- These are the heads which are called the twelve topics for any idea.
237. So far about the invention of arguments, now about their arrangement.
 238. Arrangement is the second part of logic or dialectic [and treats] of the arrangement of arguments and issues so that the relation of one to another is clear.
 239. And it is the rules for reasoning and arguing.
 240. And exists in judgment or in memory.
 241. In the judgment reside proposition and syllogism.
 242. A proposition is a relationship in the judgment between the argument and the issue to be cleared up.
 243. The things to be considered about propositions are causes, qualities and species.
 244. Their causes are material and form.

245. *Materia sunt subjectum et praedicatum.*
246. *Subjectum est arguendum illustrandum.*
247. *Praedicatum est argumentum illustrans; illud terminus minor, hoc major.*
248. *Forma axiomatis est vinculum.*
249. *Vinculum connectit subjectum et praedicatum ut homo est animal.*
250. *The qualities of a proposition are primary or secondary.*
251. *Primariae sunt affirmatio et negatio.*
252. *Affirmatum est axioma cum componuntur subjectum et praedicatum vinculo affirmato, ut Petrus est doctus, est non-arbor.*
253. *Negatum cum dividuntur vinculo negato ut Petrus non est doctus, non lapis.*
254. *Hinc contradictio cum eadem axioma affirmatur et negatur.*
255. *Affectiones secundariae sunt veritas et falsitas.*
256. *Axioma est verum cum componenda componentur et dividenda dividuntur.*
257. *Estque contingens vel necessarium.*
258. *Contingens est verum cum quae componuntur mutabiliter conveniunt et quae dividuntur mutabiliter dissentiunt, ut Petrus est aeger; Petrus non est doctus, etc.*
259. *Necessarium est verum cum quae componentur immutabiliter conveniunt et quae dividuntur immutabiliter dissentiunt, ut Homo est animal; homo non est lapis, etc.*
260. *Ejus modi tres sunt scil.*
261. *Necessarium est cum praedicatum de subjecto universaliter et semper verum est Hoc attribuit naturam communem, ut homo est animal.*
262. *Necessarium est cum praedicatum est essentielle subjecto et hoc attribuit naturam propriam, ut homo est risibilis.*
263. *Necessarium est cum praedicatum cum subjecto recipiatur. Hoc attribuit subjecto naturam et communem et propriam, ut Homo est animal rationale.*
264. *Prima est lex veritatis, secunda est lex justitiae; tertium est lex sapientiae.*
265. *Falsum est cum dividenda componuntur et componenda dividuntur.*
266. *Estque possibile vel impossibile.*

245. Their materials are subject and predicate.
246. The subject is the issue to be cleared up.
247. The predicate is the clarification of the argument; the former is the minor term, the latter the major.
248. The form of the proposition is the copula.
249. The copula connects subject and predicate; as "man is an animal."
250. The qualiites of a proposition are primary or secondary.
251. The primary are affirmative and negative.
252. An affirmative proposition is when the subject and predicate are joined by an affirmative copula; as, "Peter is learned, is non-tree."
253. A negative is when they are separated by a negative copula; as, "Peter is not learned, not a rock."
254. Hence arises contradiction when the sense proposition is both affirmed and denied.
255. The secondary qualities are truth and falsity.
256. A proposition is true when what ought to be joined is joined — what ought to be separated is separated.
257. And it is either contingent or necessary.
258. A true proposition is contingent when the things joined are joined subject to change and the things separated are separated subject to change; as "Peter is sick; Peter is not learned"; etc.
259. A true proposition is necessary when what is joined is immutably so and what is separated is immutably so; as "a man is an animal; a man is not a rock," etc.
261. It is necessary when the predicate holds true of the subject universally and always. This attributes to it a common nature; as, "a man is an animal."
262. It is necessary when what is predicated is essential to the subject. This attributes its own nature; as, "a man can laugh."
263. It is necessary when the predicate is reciprocal with the subject. This attributes to the subject both a common and its own nature; as, "a man is a rational animal."
264. First comes the law of truth; second, the law of justice, and third, the law of wisdom.
265. [A proposition] is false when what ought to be separated is joined and what ought to be joined is separated.
266. And is either possible or impossible.

267. Possibile falsum potuit esse verum ut Petrus non est calvus, non pluit.
268. Impossibile non potuit esse verum, ut homo non est animal, est lapis.
269. Sequuntur species axioma est vel simplex vel compositum.
270. Simplex est axioma quod fit simplici actu mentis ejusque vinculum est verbum, ut homo est animal, etc.
271. Axioma simplex est generale vel speciale.
272. Generale est simplex ubi commune praedicatum commune subjecto generaliter tribuitur, ut omnis homo est risibilis.
273. Speciale est ubi praedicatum non omni subjecto attribuitur.
274. Estque particulare vel proprium.
275. Particulare est ubi praedicatum communi subjecto particulariter tribuitur, ut aliquis homo est doctus.
276. Proprium est cum praedicatum subjecto proprio attribuitur ut Petrus est doctus.
277. Axioma simplex fuit compositum fit composito actu mentis ejusque vinculum secundarium est conjunctio.
278. Estque congregativum vel segregativum.
279. Congregativum est compositum congregans verba sensumque.
280. Estque copulatum vel connexum.
281. Copulatum est congregativum congregans non necessario conjunctione congregative, ut Abrahamus fuit et pius et dives. Petrus et Paulus fuerunt pii.
282. Hic veritas pendet ex omnium partium veritate falsitas ex una parte falsa.
283. Connexum est congregativum congregans necessario conjunctione connexiva, ut si homo est leo, tum est quadrupes.
284. Connexum verum potest constare ex falsis partibus.
285. Segregativum est compositum segregans sensum verbis congregatis.
286. Estque discretum vel disjunctum.

267. A possible falsehood may be true; as, "Peter is not bald; it is not raining."
268. An impossible one may not be true; as, "a man is not an animal; he is a stone."
269. Next come the species. Propositions are either simple or compound.
270. A simple proposition is made by a simple act of the mind and its connective is the verb; as, "a man is an animal," etc.
271. A simple proposition is general or special.
272. A simple general proposition is where a common predicate is attributed to a common subject universally; as, "all men are able to laugh."
273. A special [proposition] is where the predicate is not attributed to the whole subject.
274. A [special proposition] is either particular or singular.
275. A particular [proposition] is when the predicate is attributed to a common subject in part; as, "some man or other is learned."
276. A singular [proposition] is when the predicate is attributed to a subject singly; as, "Peter is learned."
277. So much for simple propositions. A compound [proposition] is made by a compound act of the mind and its connective is a secondary copula.
278. And is conjoining or segregating.
279. A conjoining compound [proposition] is one conjoining the words and the meaning.
280. And is either coupled or connected.
281. It is a coupled conjoining [proposition] when it conjoins what is not necessarily joined; as, "Abraham was both pious and rich; Peter and Paul were pious."
282. Here the truth depends on the truth of every part, the falsity on only one false part.
283. A connected conjoining [proposition] is one which conjoins with a necessary connection; as, "if a man is a lion, then he is a quadruped."
284. A true connection may be constructed out of false parts.
285. A segregating [proposition] is a compound [proposition] segregating the meaning from the words conjoined.
286. And is either discrete or disjunctive.

287. Discretum est segregativum segregans non necessario conjunctione discretiva, ut quamvis Job fuit dives tamen fuit pius. Hic partes debent esse discretæ.
288. Disjunctivum segregat necessario conjunctione disjunctiva, ut aut Dies est aut nox. Hic unum verum.
289. Adhuc de axiomato sequitur syllogismus.
- Syllogismus est in judicium dispositio argumenti cum questione ad probandum.
290. Syllogismi sunt membra et species.
291. Membra sunt antecedens et consequens.
292. Antecedens est membrum syllogismi quo argumentum disponitur cum partibus questionis.
293. Ejus membra sunt propositio vel assumptio.
294. Propositio est pars qua disponitur argumentum saltem cum prædicato quaestionis. Hinc propositio major.
295. Assumptio est pars qua disponitur argumentum cum subjecto quaestionis quandoque sine eo assumitur. Hinc propositio minor dicitur.
296. Conclusio est altera pars syllogismi quæ complectitur partes quaestionis eamque concludit hinc dicitur complexio.
297. In quo nihil debet esse quin fuit in præmissis nec quantum nam sola quaestio.
298. Nunc species syllogismus est simplex vel compositus.
299. Syllogismus simplex est ubi argumentum disponitur simpliciter, i.e. cum prædicato in propositione et cum subjecto in assumptione.
300. Estque contractus vel explicatus.
301. Contractus est simplex ubi argumentum est species subjecti quaestionis ideoque præcedit in utraque parte antecedentis. Assumptione semper affirmata conclusionem particularem efficit — ut —

287. A segregating [proposition] is discrete when it segregates discrete things by a conjunction which is not necessary; as, "although Job was rich, yet he was pious." Here the parts must be discrete.

288. A disjunctive proposition segregates disjoined things by a necessary conjunction; as, "it is either day or night." Here one [must be] true.

289. So far about propositions, now comes the syllogism.

A syllogism is an arrangement in the judgment of an argument with the question to be proved.

290. A syllogism has members and kinds.

291. The members are the antecedent and the consequent.

292. The antecedent is the member of a syllogism by which the argument is stated together with the parts of the question.

293. Its members are the premise and the assumption.

294. The premise is the one in which the point of departure of the argument is stated together with the predicate of the question. Hence [called] the major premise.

295. The assumption is the part by which the argument is stated together with the subject of the question. Sometimes assumed without it. Hence called the minor premise.

296. The conclusion is the other part of the syllogism which connects the parts of the question and concludes it. Hence called the connection.

297. In which nothing may appear which was not in the premises nor anything except only the question.

298. Now [we pass to] the species. A syllogism is either simple or compound.

299. A simple syllogism is where the argument is stated simply, *i.e.*, with the predicate in the major premise and with the subject in the assumption.

300. And it is either contracted or explicit.

301. A simple syllogism is contracted when the argument is the species of the subject of the question and therefore precedes in both parts of the antecedent. The [minor premise] assumption being always affirmative, it yields a particular conclusion, as—

302. Contractus contracta forma solet preferri ut datur homo non doctus est Petrus. Petrus non est doctus — Prop. major. Petrus est homo, ergo — minor. Aliquis homo non est doctus — conclusio.

303. Explicatus est simplex cujus propositio est generalis vel propria ubi si propositio (vel assumptio) est negativa particularis vel propria talis erit conclusio.

304. Estque primus vel secundus.

305. Explicatus primus est ubi argumentum est genus subjecti quaestionis ideoque sequitur in utraque parte : teedentis altera earum negata conclusionem negatam efficit, ut

Prob. Petrus non est lapis, sic

Lapis non est homo,

Petrus est homo, ergo

Petrus non est lapis.

306. Explicatus secundus est ubi argumentum est media affectionis inter genus et species ideoque praecedit in propositione sequitur affirmatum in assumptione ut

Prob. Petrus est animal, sic

Homo est animal,

Petrus est homo, ergo

Petrus est animal.

307. Simplex fuit compositus est ubi tota quaestio est pars altera propositionis affirmatae et compositae et argumentum altera.

308. Tollere his est specialem contradictionem.

309. Estque connexus aut disjunctus.

310. Connexus est compositus propositionis connexae.

311. Estque primus vel secundus duorum modorum.

312. Connexus primus est quo assumptio prima pars propositionis alterae concludat, ut si Petrus est homo, tum est risibilis, et est homo, ergo risibilis.

302. A contracted syllogism is usually given in the contracted form; as, "A given man who is not learned is Peter. Peter is not learned — major premise — Peter is a man, therefore — minor premise — A certain man is not learned — conclusion."

303. An explicit syllogism is a simple one whose major premise is universal or singular, when, if the major (or minor) is a negative particular or singular, the conclusion will be so likewise.

304. And it is first or second.

305. It is explicit [in the] first [figure] when the argument is the genus of the subject of the question and therefore follows in both parts of the antecedent; if either of them is negative, the conclusion yielded will be negative; as —

"Problem: Peter is not a stone, thus

A stone is not a man,

Peter is a man, therefore

Peter is not a stone."

306. It is explicit [in the] second [figure] when the argument is the middle term between the genus and the species, and therefore precedes in the major premise and follows affirmative in the minor; as —

"Problem: Peter is an animal, thus

A man is an animal,

Peter is a man, therefore

Peter is an animal."

307. So far [simple syllogisms]; a composite [syllogism] is when the whole question is one part of a major premise affirmative and compounded and the argument is the other.

308. To deny this is a special [form of] contradiction.

309. It is either connective or disjunctive.

310. A connective [syllogism] is compounded of a connective major premise.

311. And is first or second of two modes.

312. The connective of the first mode is one in which the minor premise is the first part of the major, in order that it may conclude the other; as, "if Peter is a man, then he can laugh, and he is a man, therefore he can laugh."

313. Connexus secundus est ubi tollitur secunda ut prima tollatur; ut si homo est leo, tum est quadrupes, at non est quadrupes, ergo non leo.
314. Disjunctus est compositus propositionis disjunctae.
315. Estque primus vel secundus.
316. Primus est ubi affirmatur prima pars ut tollatur altera, ut Hoc tempus aut dies est aut nox, at dies ergo non nox.
317. Secundus est ubi tollitur secunda ut prima concludat ut aut dies est aut nox, non nox, ergo dies.
318. Ab hac syllogismorum doctrina erunt omnes paralogismi au in aequivocatione vel fallacivo quattuor terminorum vel accidentis etc. vel petitione principii, etc.
319. Haectenus in judicium sequitur in memoriam dispositio et methodus.
320. Methodus est dispositio variorum axiomatorum (hinc argumentorum mediatibus axiomatis) pro naturam suae claritate praepositorum ut memoria comprehendantur.
321. Generalia specialibus praeponenda et semel docenda.
322. Vinculum methodi est transitio.
323. Transitio est vinculum connectens partes methodi.
324. Estque perfecta vel imperfecta.
325. Perfecta est sum et quod dictum et quod dicendum est declaratur.
326. Imperfecta cum alterutrum tantum declaratur.

Finis

327. Haectenus magis sequitur minus generalis est Grammatica vel Rhetorica.
328. Grammatica est ars extypa bene loquendi.
329. Objectum ejus est eupraxia locutionis.
330. Eupraxia locutionis est motus regularis loquentis in loquendo.
331. Explicatur ab objecto voce et reguli loquendi.

313. The connective of the second mode is when the second is denied in order that the first may be denied; as, "if a man is a lion, then he is a quadruped, but he is not a quadruped, therefore he is not a lion."
314. A disjunctive [syllogism] is compounded of a disjunctive major premise.
315. And is [of the] first or second [type].
316. The first [type] is where the first part is affirmed in order that the other may be denied; as, "this time is either day or night, but it is day, therefore it is not night."
317. The second [type] is where the second is denied in order that the first may be concluded; as, "it is either day or night; it is not night; therefore it is day."
318. From this doctrine of the syllogisms all paralogsms will be [seen to consist] in equivocation or fallacious use of the four terms or in accidents, etc., or in begging the question, etc.
319. So far about [arrangement] in the judgment. We have next arrangement and method in memory.
320. Method is the arrangement of the various propositions (hence of the arguments [made by] intermediary propositions) in order according to the clarity of their natures so that they may be held in memory.
321. Generals should be put before particulars, likewise in teaching.
322. The connection of method is transition.
323. Transition is the connection connecting the parts of method.
324. And is either perfect or imperfect.
325. It is perfect when both what has been said and what is to be said is made clear.
326. It is imperfect when either of these is stressed too much.

End

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327. So far we have considered the more general arts, now follow the less general, *viz.*, grammar and rhetoric.
328. Grammar is the ectypal art of speaking well.
329. Its object is the *eupraxia* of speaking.
330. The *eupraxia* of speaking is the orderly procedure of the speaker in speaking.
331. It is based on the words formed and the rules of speaking.

332. Hinc membra grammaticae sunt etymologia et syntaxis.
333. Etymologia est prima pars Grammaticae qua vocum singularum proprietates explicantur.
334. Vox est nota qua conceptus mentis de re qualibet exprimitur.
335. Eius sunt affectiones et species.
336. Affectiones sunt orthographia et prosodia.
337. Orthographia est affectio quae versatur circa litteras et syllabas.
338. Littera est nota exprimendi sonum.
339. Syllaba soni integri expressio.
340. Prosodia est qua singulae syllabae recte accentuantur.
341. Accentus est tonus vel spiritus vel tempus.
342 and 343. Tonus est accentus quo syllaba elevatur vel deprimitur;
344. estque acutus, gravis, vel circumflexus.
345. Spiritus qua aspere vel leniter spiratur.
346. Tempus est mora in exprimendo syllabam.
347. Species distinguuntur in declinabiles et indeclinabiles.
348. Declinabiles sunt quae numero et persona flecti possunt.
349. Numerus est singularis quo de uno vel pluralis quo de pluribus loquitur.
350. Persona est triplex — prima, secunda, tertia.
351. Prima loquitur de semet ipso ut ego, nos;
352. Secunda est cui loquitur ut, tu, vos.
353. Tertia est de qua loquitur, ut, ille, illi.
354. Voces declinabiles sunt: nomen cui subsequuntur pronomina, vel verbum cui subsequuntur participia.
355. Nomen est vox flexilis quae est rei cuius libet vera appellatio.
356. Ejus sunt accidentia et species.
357. Accidentia sunt casus, genus, vel flexio.

332. Hence the parts of grammar are etymology and syntax.
333. Etymology is the first part of grammar by which the correct usages of single words are explained.
334. A word is a sign by which the concepts of the mind about anything are expressed.
335. It has qualities and kinds.
336. Its qualities are orthography and prosody.
337. Orthography is the quality [of a word] which is concerned with letters and syllables.
338. A letter is a sign expressing a sound.
339. A syllable is the expression of a whole sound.
340. Prosody [teaches] how single syllables are accentuated correctly.
341. Accent is the sound in respect of either breathing or length of time taken.
- 342 and 343. The accent is the sound by which the syllable is either raised or lowered;
344. And is acute, grave or circumflex.
345. The breathing [mark] governs the matter of hard or soft breathing.
346. The time taken is the amount of time devoted to the expression of a syllable.
347. The kinds [of words] are distinguished into declinables and indeclinables.
348. Declinables are those which change their number and person.
349. Number is singular when one is referred to and plural when several.
350. Person is threefold: first, second and third.
351. In the first the reference is to myself; as "I, we";
352. In the second it is to the person to whom one is talking; as "thou, you."
353. In the third, it is to the [person or] thing talked about; as, "he, they."
354. Declinable words are either nouns, under which come pronouns, or verbs, under which come participles.
355. A noun is a word which can be inflected and which is the true name for any particular thing.
356. It has accidents and species.
357. Its accidents are case, gender, and inflection.

358. Casus est medium flectendi nomen.
359. Estque nominativus, genitivus, dativus, accusativus, vocativus, vel ablativus, quae diversis linguis diversa signa habent.
360. Genus est sexus in flectendo discretio.
361. Estque distinctum ut masculinum, foemininum, vel neutrum, vel conjunctus ut commune.
362. Flexio est modus flectendi nomen.
363. Nomen est substantivum vel adjectivum.
364. Substantivum est nomen substantiarum ut homo, domus, manus, etc.
365. Adjectivum est nomen accidentium.
366. Adjectivis accedit comparatio.
367. Adjectivorum comparatio est qua augetur seu diminuitur relatio adjectivo ad substantivum.
368. Gradus tres sunt positivus, ut rarus, comparativus, ut rarior, vel superlativus, ut rarissimus.
369. Pronomen est vox flexilis quae est secundarium quoddam nomen.
370. Pronomina sunt nominum quasi, cognomina hinc.
371. Hinc eadem habet accidentia ut casus, genus, flexio, et easdem species ut substantivum et adjectivum cui quandoque comparatio.
372. Verbum est vox flexilis quae significat agere pati vel esse.
373. Ejusque sunt accidentia et species.
374. Accidentia sunt tempus, modus vel conjugatio.
375. Tempus est modum flectendi verbum distinguendo in praesens praeteritum et futurum.
376. Modus est verbi per tempora variatio.
377. Conjugatio variis est varia.
378. Verbum est activum passivum vel neutrum.
379. Activum, significat agere, ut amo.
380. Passivum significat pati, ut amor.
381. Neutrum significat esse, ut sum.
382. Participium est vox flexilis quae partem rationis nominum partem verbi habet.
383. Derivatum a verbo habet tempus et easdem significationes ut amans, amanturus, amandus.

358. Case is the medium for the inflection of a noun.
359. The cases are nominative, genitive, dative, accusative, vocative, and ablative, which have different signs in different languages.
360. Gender is the distinction of sex made in inflection.
361. And is distinguished into masculine, feminine, neuter, and conjunctive and common.
362. Inflection is the manner of inflecting a noun.
363. A noun is a substantive or an adjective.
364. A substantive is a name for things [substances]; as "a man, house, hand," etc.
365. An adjective is a name for accidents [attributes].
366. Adjectives are susceptible of degrees of comparison.
367. The comparison of adjectives is the process by which the relation between the adjectives and the substantive is increased or diminished.
368. There are three degrees: the positive, as "rare"; the comparative, as "rarer"; the superlative, as "rarest."
369. A pronoun is an inflectible word, which is in a way a secondary noun.
370. Pronouns are nouns of a sort, hence called cognomens.
371. Hence it has the same accidents, as case, gender, inflection, and the same species, as substantive and adjective, and sometimes it has comparison.
372. A verb is a word capable of inflection, which signifies to do, undergo, or be.
373. It has accidents and species.
374. Its accidents are tense, mode, and conjugation.
375. Tense is the manner of inflecting a verb by distinguishing it into present, past, and future.
376. Mode is the variation of the verb through the tenses.
377. Conjugation is various in various [languages].
378. A verb is active, passive or neutral.
379. The active signifies doing; as "I love."
380. The passive signifies to undergo; as "I am loved."
381. The neutral signifies a state of being; as "I am."
382. A participle is a word capable of inflection which has in part the structure of a noun and in part that of a verb.
383. Being derived from the verb it has tense and the same general meanings; as "loving," "about to be loved," "being loved."

384. Habetque accidentia nominis adjectivi ideoque casum, genus, flexionem, et comparisonem.
385. Haecenus declinabiles voces indeclinabiles sunt quae numero et persona flecti nequeunt dicuntur particulae.
386. Suntque adverbium, conjunctio, praepositio vel interjectio.
387. Adverbium est vox inflexilis quae alteri voce adjungitur ad explicandam circumstantiam vel qualitatem aliquem.
388. Adverbium magnam adfert opem ad vocis declinabilis significationem illustrandam, ut certem, sedulo, vehementer, quo, ubi, et, hinc, idem, illuc, etc.
389. Conjunctio est vox inflexilis quae voces flexiles et multiplices orationis partes connectit ut, si, sive, at, et, aut, vel, etc.
390. Praepositio est vox inflexilis verba nomen tanquam terminum vel causam motus aut quietis adjungens, ut ad, apud, secus, juxta, propter, secundum, ante, post.
391. Interjectio est vox flexilis quae prorumpentem animi affectum denotat, ut, Oh! proh! vah! Euge!
392. Haecenus de singulis vocibus ceu notis conceptus nostros expremuntibus, earumque proprietatibus in etymologia. Sequitur eorum structura in syntaxi. Syntaxis est secunda pars Grammaticae quae vocum singularum structuram docet.
393. Huc accidunt punctae.
394. Puncta sunt notae distinctionis sententiarum.
395. Syntaxis est concordia vel regimen illis enim duobus omnis sententia contuitur.
396. Concordia est syntaxis qua voces quaedam in accidentibus quibusdam conveniunt.
397. Estque inter nominativum et verbum vel inter substantivum et relativum.
398. Verbum cohaeret cum nominativo in numero et persona, ut ignis urit.
399. Adjectivum cum substantivo genere, numero, et casu, consentit, ut vir bonus, causa bona, regnum pacificum.

384. And it has the accidents of an adjectival noun, hence case, gender, inflection, and comparison.

385. So far [we have considered] declinable words. The indeclinable are those [expressing] number and person—they cannot be inflected. They are called particles.

386. And they are adverb, conjunction, preposition, and interjection.

387. An adverb is an indeclinable word which is joined to another word for the sake of explaining some circumstance or quality.

388. An adverb brings great force to bear upon the meaning of the declinable word to be elucidated; as “certainly, diligently, vehemently, why, where, and hence, likewise, thither,” etc.

389. A conjunction is a word not subject to inflection, which connects inflectible words and many parts of speech, as: if, whether, but, and, or, etc.

390. A preposition is a word, not capable of inflection, joining verbs and nouns, and indicating either the termination or the cause of movement or rest; as “toward, with, along, beside, on account of, behind, before, after.”

391. An interjection is a word [in-]capable of inflection which denotes a sudden burst of emotion; as, “Oh! Alas! Ah! Bravo!”

392. So far we have considered single words or signs expressing our concepts and their proper uses in etymology. There follows [a consideration] of their structure in syntax. Syntax is the second part of grammar, which treats of the structure of single words.

393. Here belongs the period.

394. Periods are marks distinguishing sentences.

395. Syntax is a [matter of] agreement or a guiding rule, for in these two every sentence is contained.

396. Syntax is an agreement where certain words go with certain accidents.

397. And takes place either between a subject, and [its] verb, or between a substantive and an adjective, or between an antecedent and a relative.

398. The verb agrees with the subject in number, and person; as “fire burns.”

399. An adjective agrees with the substantive in gender, number and case; as “a good man, a good cause, a peaceful reign.”

400. Relativum cum antecedente convenit genere, numeri et persona, ut ille bonus est qui quod est bonum facit.

401. Haec de concordia regimen est quo vox una ab alia regitur, atque hic:

402. Genitivus regitus a substantivo cum duo substantiva variarum rerum concurrunt postea est genitivus ponendus, sic Homo Dei excellentia virtutis. Sed Haebræis prior dicitur pone in regimine, ut — [Hebrew words]

403. Genitivus dativus et accusativus reguntur a adjectivis quae post se sua signa habent, ut avidus novitatis, bonus tibi.

404. Genitivus regitur a quibusdam pronomibus.

405. Nunc nominativus nunc genitivus nunc dativus nunc accusativus nunc ablativus reguntur a verbo nunc activo nunc passivo nunc neutro quatenus diverso respectus habent;

406. Et praecipue cum verba variorum casum signa post se habent ut ego sum vir, reminiscor tui, do tibi, feci librum, utor libro, etc.

407. Casus suorum verborum reguntur a participiis, ut bonus existens.

408. Uterque et nominativus et genitivus et dativus et accusativus reguntur ab adverbis, ut ecce vir, etc.

409. Uterque ceu quicumque casus et quaecumque tempora verborum atque sententiae reguntur vel connectuntur ab conjunctionibus, ut vir et mulier, boni et mali.

411. Nominativus genitivus dativus accusativus et vocativus reguntur ab interjectione.

412. Duorum verborum ultimum in infinitivo est ponendum.

413. N. B. Omnes hae regulae Grammaticae sunt ita generales ut cuique linguae au latinae, graecae, Haebraeae, etc. conveniunt —

Finis

Cuique linguae specialis grammatica.

414. Haectenus Grammatica sequitur Rhetorica quae est secunda minus specialis. Rhetorica est Ars Ectypa bene ornandi loquelam ceu ornate dicendi.

400. A relative agrees with its antecedent in gender, number, and person; as, "he is good who does what is good."
401. This is the rule of agreement where one word is governed by another, as follows:
402. A genitive governed by a substantive, is to be placed after it, when two substantives signifying different things go together; thus, "Man of God," "perfection of virtue." But by the Hebrews it is placed before, as — [Hebrew words]
403. The genitive, dative and accusative are governed by adjectives whose own signs follow them; as "desirous of novelty," "good for you."
404. The genitive is governed by certain pronouns.
405. Sometimes the nominative, sometimes the genitive, sometimes the dative, sometimes the accusative, sometimes the ablative are governed by a verb [which is] sometimes active, sometimes passive, sometimes neuter, since they have different meanings;
406. And especially when verbs have the signs of various cases following them; as, "I am a man, I remember you, I give you, I have made a book, I use a book," etc.
407. The cases of their verbs are governed by participles; as "an existing good."
408. Either nominative or genitive or dative or accusative are governed by adverbs; as, "behold the man," etc.
409. Any sort of case or tense of the verbs and sentences are governed or connected by conjunctions; as "man and wife," "good and evil."
411. Nominative, genitive, dative, accusative, and vocative are governed by an interjection.
412. The last of two verbs should be put in the infinitive.
413. N. B. All these rules are so general that they hold good for any language, Latin, Greek, Hebrew, etc.

End

Every language has its own special grammar.

414. So far grammar, there follows rhetoric, which is the second less special [*should be general*] [art]. Rhetoric is the extypal art of properly embellishing speech, or in other words of speaking with embellishment.

415. Eius objectum est eupraxia orationis loquae ceu orate dicere.
416. Est praxia orationis est motus loquularis ornantis ceu oratoris in proferendo sermonem ornatam.
417. Explicatur ab objecto et variis eius modis in ornando sermonem quae coincidunt et doctrina et usu.
418. Objectum est ornamentum sermoni imponendum quod eum facit elegantior.
419. Quod cum sit externum vel internum idcirco partes rhetoricae sunt elocutio vel pronuntiatio.
420. Elocutio est internum ornamentum orationis.
421. Estque tropus vel figura.
422. Tropus est elocutio qua vox a nativa sua significatione in aliam immutatur.
423. Eius sunt affectiones et species.
424. Affectiones sunt emphasis, catachresis, hyperbole, metaleipsis vel alegoria.
425. Emphasis est exasperatio significationis tropi, ut flamma irae.
426. Catachresis ab abusio vocis in tropo, ut montes surdi, lapides caeci.
427. Hyperbole est eximia augmentatio vel diminutio significationis tropi ut domus ad caelum.
428. Metaleipsis est tropi in uno verbo multiplicatio, ut flumina aquarum, pro torrente; torrens pro cursu aquarum, pro lachrimis.
429. Alegoria est continuatio tropi ut parabola.
430. Tropus est metonymia, ironia, metaphora, vel synechdoche.
431. Metonymia est tropus causae pro effectu vel subjecti pro adjuncti et contra.
432. Metonymia causae est cum causa ponitur pro causato ut efficiens pro effectu, ut Isaiah, Jeremiah, etc. vel materia pro materiali ut ferrum pro gladio.
433. Metonymia effecti est cum effectum ponitur pro causa ut mors pallida, i. e. pallores reddit.
434. Metonymia subjecti est cum subjectum ponitur pro adjuncto ut Jerusalem pro incolis.

415. Its object is the *eupraxia* of embellished speech or in other words to speak with embellishment.
416. It is the practice of embellishment, the embellishing of the movements of speech, or of [the art of] the orator in making an ornate speech.
417. It is expounded by [giving] the object and various methods of embellishing speech, which coincide both in doctrine and use.
418. The object is to put on speech an embellishment which makes it more elegant.
419. But since this is either external or internal, therefore, the parts of rhetoric are elocution and pronunciation.
420. Elocution is the internal embellishment of speech.
421. And is either a trope or a figure.
422. A trope is a form of speech whereby a word is changed from its original meaning into another.
423. It has qualities and kinds.
424. Its qualities are emphasis, catachresis, hyperbole, metalepsis and allegory.
425. Emphasis is an additional force given to the meaning of a trope; as "the flame of wrath."
426. Catachresis is the abuse of a word in a trope; as "the deaf mountains," "the blind stones."
427. A hyperbole is an extraordinary increase or decrease in the meaning of a trope; as "a house reaching to the sky."
428. Metalepsis is a multiplication of a trope in one word; as "rivers of water" for a torrent, "a torrent" for the running of water or for tears.
429. An allegory is the continuation of a trope; as a parable.
430. A trope is either metonymy, irony, metaphor, or synecdochy.
431. Metonymy is a trope where the cause (is used) for the effect, or a subject for its attribute, and vice versa.
432. Metonymy of the cause is when a cause is substituted for what is caused by it as an efficient cause, for its effect; as Isaiah, Jeremiah, etc.; or the material for what is made of it; as, steel for sword.
433. Metonymy of the effect is when an effect is substituted for the cause; as "pale death," it makes men pale.
434. Metonymy of the subject is when a subject is substituted for its attribute; as Jerusalem for its inhabitants.

435. Metonymia adjuncti est cum adjunctum ponitur pro subjecto, ut vinum pro poculo.
436. Ironia est tropus cum e contrario contrarium significatur, ut O bone vir, i. e. male.
437. Huc refer scomma, sarcasmus, paraleipsis, et apophasis.
438. Scomma est jocus urbanus et jucundus.
439. Sarcasmus contra.
440. Paraleipsis est qua affirmamus nos ea praeter ire quae maximae dicimus aut facimus, ut mitto injuriam, mitto adulterium ejus.
441. Apophasis est qua negamus nos ea dicere quae facere quae dicimus aut facimus, ut non dico hoc vel illud, sed si dico non negabis.
442. Metaphora est tripus cum simile ponitur pro simili, ut aurea saecula.
443. Synechdoche est tropus totum pro parte vel partis pro toto.
444. Estque integri vel membri vel generis vel speciei.
445. Synechdoche integri est cum integrum ponitur pro membro, ut oceanum biberunt.
446. Synechdoche membri est cum membram ponitur pro integro, ut tectum pro domo.
447. Synechdoche generis est cum genus ponitur pro specie ut propheta pro Isaia.
448. Synechdoche speciei est cum species ponitur pro genere ut ... [?]
449. Iam Figura. Figura est elocutio qua sermonis habitus a simplici ac consueto modo mutatur in alium.
450. Estque dictionis vel sententiae.
451. Figura dictionis est cum sententia figuratur dictionibus apte et iucunde inter se resonantibus.
452. Estque in soni dimensione vel repetitione.
453. In dimensione est suavis ille sonorum in oratione numerus qui est.
454. Poeticus vel oratoricus.

435. Metonymy of the attribute is when an attribute is substituted for its subject; as wine for a cup.
436. Irony is a trope where a contrary meaning is imputed to the contrary; as, "O noble man," *i. e.*, "wicked."
437. Here I bring in the jest, sarcasm, paralepsis, and apophasis.
438. *Scommia* is a refined and agreeable joke.
439. Sarcasm is the opposite.
440. Paralepsis is when we say we will disregard those things which we talk of or do most; as, "I pass by his injury," "I pass by his adultery."
441. Apophasis is where we deny that we say what we say or do; as, "I do not say it, you will not deny it."
442. A metaphor is a trope where a thing is substituted for one similar to it; as "golden age."
443. A synechdochy is a trope [where] part [is substituted] for whole or whole for part.
444. And is of the integral whole, of the member, of a genus, or of the species.
445. Synechdochy is of the whole when the whole is substituted for an essential part; as, "they drank the ocean."
446. Synechdochy of the member is where a member is substituted for the whole; as, "the roof," meaning "the house."
447. Synechdochy of the genus is when the genus is substituted for the species; as, "prophet" for "Isaiah."
448. Synechdochy of the species is when the species is substituted for the genus; as . . . [?]
449. Now figure. A figure of speech is where the form of diction is changed from a simple and ordinary to another manner.
450. And it is either in the manner of speaking or in the sentence [structure].
451. A figure in the manner of speaking is when a sentence is constructed out of forms of speech which sound well and pleasing together.
452. And consists either in the dimension or the repetition of a sound.
453. In dimension it is that number of sounds which is pleasing in speech.
454. It is poetical or oratorical.

455. Poeticus est qui certis certorum speciorum legibus astringitur.
456. Cui accidunt metaplasmus pes, scansio et cantus.
457. Metaplasmus est in addendo, auferendo, vel immutando.
458. In addendo et auferendo sunt prosthesis, aphairesis, epenthesis, syncope, paragoge, apocope.
459. Prosthesis est additio litterae vel syllabae initio dictionis, ut gnatus pro natus.
460. Aphairesis est ejusdem ablatio, ut tendere pro contendere.
461. Epenthesis est interpositio litterae vel syllabae in medii dictionis ut religio pro religio.
462. Syncope est ejusdem ablatio ut ostendum pro ostendendum.
463. Paragoge est additio litterae vel syllabae fini dictionis, ut dicier pro dici.
464. Apocope est ejusdem ablatio ut tun pro tunc.
465. In immutando est tmesis, metathesis, antithesis, diastole, systole.
466. Tmesis vocem alteram imponendo bisecat ut est quadam prodire tenus pro quadantenus.
467. Metathesis transponit litteram, ut pistris pro pristis.
468. Diastole brevem syllabam prodeicit ut cōr pro cor.
469. Systole longam corripit it tulērunt pro tulērunt.
470. Pes est mensura syllabarum.
471. Estque monosyllabus, disyllabus vel trisyllabus.
472. Scansio est mensuratio carminum.
473. Cantus est melodiosa vociferatio carminum.
474. Huc pertinent omnes toni in musica quibus vocilefantur.
475. Numerus poeticus est rhythmus aut metrum, dicuntur carmina.
476. Rhythmus est numerus poeticus certum pedum numerum nulla habita quantitatis ratione ultimis similibus complectens, ut
 Quot sunt vere novo flores
 Quot odores quot colores.
477. Metrum est numerus poeticus certis pedibus constans habita quantitatis ratione ultimum habet indifferentem, ut
 Omnia vincit amor et nos cedamus amori
 Res est solliciti plena timoris amor.

455. The poetical is that form of diction which is contracted according to certain laws of certain kinds.

456. To which belong metaplasm, foot, scanning and song.

457. Metaplasm takes place by adding, subtracting, or altering.

458. By adding and subtracting there are *prothesis*, *aphairesis*, *epenthesis*, *syncope*, *paragoge*, *apocope*.

459. *Prosthesis* is the addition of a letter or syllable at the beginning of a word; as, *gnatus* for *natus*.

460. *Apharesis* is the subtraction of the same; as, *tender* for *contendere*.

461. *Epenthesis* is the insertion of a letter or syllable in the middle of a word; as, *relligio* for *religio*.

462. *Syncope* is its extraction; as, *ostendum* for *ostendendum*.

463. *Paragoge* is the addition of a letter or syllable at the end of a word; as, *dicier* for *dici*.

464. *Apocope* is its subtraction; as, *tun* for *tunc*.

465. By altering there are imesis, metathesis, antithesis, diastole, systole.

466. *Tmesis* is bisecting a word by the insertion of another; as *est quadam prodire tenus* for *quandantenus*.

467. *Metathesis* transposes a letter; as *pistris* for *pristis*.

468. *Diastole* lengthens a short syllable; as *cōr* for *cor*.

469. *Systole* shortens a long one; as *tulērunt* for *tulērun*t.

470. The foot is the measure of syllables.

471. And is monosyllabic, dissyllabic or trisyllabic.

472. **Scanning** is the measuring of songs.

473. A song is the melodious vociferation of lyrics.

474. Here belong all the tones which are vocally made in music.

475. A measure in poetry has rhyme and meter. They are called [lyric poems] songs.

476. Rhythm is a poetical measure of a certain number of feet, with no general relation of quantity, the last [feet] similar, weaving together; as

Quot sunt vere novo flores

Quot odores quot colores.

477. Meter is a poetic measure having a certain scheme of feet and quantity and the relation between its last (feet) indifferent; as

Omnia vincit amor et nos cedamus amori

Res est solliciti plena timoris amor.

478. Numerus oratorius est qui constat incerta et libera pedum jactura.
479. Hoc concomitant hyperbaton, syllogismi et methodi crypses.
480. Hyperbaton est varia transpositio dictionum.
481. Syllogismi et methodi crypsis est aberratio a legibus eorum elegantiae gratia.
482. Sequitur in soni repetitione soni similis vel leviter dissimilis.
483. Soni similis est continua vel disjuncta.
484. Continua est epizuxis anadiplosis vel climax.
485. Epizeuxis est repetitio soni similis continua in eadem sententia vel in parte vocis vel voce integra, ut, nulla futura tua est, nulla futura tua est.
486. Anadiplosis est repetitio soni similis continua in diversis sententiis cum fine praecedentis et initio sequentis, ut aestima sapientiam sapientia est bona.
487. Climax est anadiploseos gradatio, ut quod libet licet, quod licet possunt, quod possunt faciunt, etc.
488. Disjuncta est loco eodem vel diverso.
489. Loco eadem est anaphora, epistrophe vel symphone.
490. Anaphora est repetitio soni similis in initio sententiarum ut, te amo, te laudo, te colo.
491. Epistrophe in fine sententiarum, ut, cura habetur, et ille habetur.
492. Symphone in utrisque, ut quis te diligit? Ille quis te colit? Ille quis te curat? Ille.
493. In loco diverso est epanalepsis vel epanodos.
494. Epanalepsis est repetitio soni similis initio et fine ejusdem sententiae ut, multa me et illum impediunt multum.
495. Epanodos est repetitio similis soni in initio et fine diversarum sententiarum intercedente anadiplosi ut, vae illis qui vocant bonum vae illis.

478. The oratorical measure is that which remains uncertain and free from the handicap of feet.
479. Here come hyperbaton and the crypsis of syllogism and method.
480. Hyperbaton is a varied transposition of words.
481. The crypsis of syllogism and method is an aberration from their laws for the sake of elegance.
482. Now we come to [figures of speech consisting] of the repetition of sound, either of a similar sound or of slightly dissimilar.
483. [The repetition] of a similar sound is continuous or disjunctive.
484. When continuous it is *epizeuxis*, *anadiplosis* or climax.
485. *Epizeuxis* is the continuous repetition of a similar sound in the same sentence in part or in whole; as, "You have no future, you have no future."
486. *Anadiplosis* is the continuous repetition of a similar sound in different sentences, at the end of the preceding and at the beginning of the succeeding sentence; as, "Love wisdom. Wisdom is good."
487. Climax is a series of *anadiploses*; as, "what they please, they may do; what they may do, they can do; what they can do they do do." etc.
488. Disjunctive [repetition] is either in the same place or in another.
489. When in the same place it is *anaphora*, *epistrophe*, or *symphone*.
490. *Anaphora* is the repetition of a similar sound in the beginnings of sentences; as "Thee I love, Thee I praise, Thee I cherish."
491. *Epistrophe*, at the close of sentences; as, "Care is with us, and he is with us."
492. *Symphone*, in either; as, "Who works for you? He who cherishes you? He who cares for you? Yes, he."
493. In different places, it is *epanalepsis* or *epanodos*.
494. *Epanalepsis* is the repetition of a similar sound at the beginning and end of the same sentence; as, "Many things hinder him and me in many ways."
495. *Epanodos* is the repetition of a similar sound at the beginning and end of different sentences, interposing between *anadiploses*; as, "Woe to them that call good evil, and that call evil good, woe to them."

496. Soni leviter dissimilis est paranomasia vel polypoton.
497. Paranomasia est cum dictio litterae vel syllabae alicujus commutatione significatione quoque commutatur, ut non emissus ex urbe sed immissus in urbem.
498. Polypoton est cum ejusdem originis variis casibus temporibusque voces inter se consonant, ut mors, mortis, morti, mortem, nisi morte dedisset aeternae vitae janua clausa foret.
499. Haec de figura dictionis Figura sententiae est cum tota sententiae figuratur dictionibus aliquem animi motum ceu affectum experimentibus.
500. Estque in logismo vel dialogismo.
501. In logismo est cum sententia sine collocutione.
502. Estque eiphonesis, epiphonema, revocatio sui, apostrophe vel prosopopaea.
503. Eiphonesis est figura in logismo per interjectionem exclamandi expressam vel intellectam expressa, ut O Clementiam admirabile.
504. Epiphonema est quae ad finem rei narratae addi solet, ut de Solomone tanta fuit eius sapientia.
505. Revocatio sui est epanorthosis vel aposiopesis.
506. Epanorthosis est cum antecedens aliquod corrigendo revocatur, ut, Papaeis sunt Christiani, Christiani dixi? potius Diaboli con ethnici.
507. Aposiopesis est cum sententiae mistratae cursus revocatur, ut ego te furcifer si vivo.
508. Apostrophe est cum ad alienam rem convertitur oratio quam instituta oratio requirit, ut, O angeli vos testes volo innocentiae neae, loquens di sua innocentia.
509. Prosopopaea est alienae personae in oratione nostra loquentis fictio, ut David redarguens iniquitatem magnatum dicit Deus stat in conventu fortium. Usquequo injuste iudicabetis et personas accipietis. Psalm 82.
510. Figura in dialogismo est cum sententia figuratur cum collocutione interrogando, et respondendo.
511. Estque deliberatio, occupatio, epitrope vel synchoraisis.

496. [The repetition] of slightly dissimilar sounds is either *paranomasia* or *polypoton*.

497. *Paranomasia* is when a word is changed by a letter or syllable with a change of meaning; as, "Not sent out of the city, but sent into [against] the city."

498. *Polypoton* is when words of the same origin are sounded together in different cases or tenses; as, "Had not the death of death given death to death by death the gates of eternal life would be closed."

499. So much concerning figures of diction. A figure of the sentence is when the whole sentence is adorned with words expressing some motion or affect of the soul.

500. And is either in [the form of] simple speech or dialogue.

501. It is in the form of simple speech when the sentence is without conversation.

502. And is either *eiphonesis*, *epiphonema*, withdrawing one's own statement, apostrophe or *prosopopaea*.

503. *Eiphonesis* is a figure in plain speech made by the interjection of something to be exclaimed, either expressed or understood; as, "O wonderful clemency!"

504. *Epiphonema* is what is frequently added to the end of a narrative; as, concerning Solomon, "so great was his wisdom."

505. Withdrawal of one's own statement is either *epanorthosis* or *aposiopesis*.

506. *Epanorthosis* is when the antecedent is revoked by correcting something; as, "The papists are Christians, Christians did I say? Sooner, devils or pagans."

507. *Aposiopesis* is when the course of a mixed sentence is broken, as, "I, you rascal, as I live."

508. Apostrophe is when the speech is addressed to something else than the beginning of the speech indicated; as, "O angels, I want you to be witnesses to my innocence," speaking of his innocence.

509. *Prosopopaea* is the device of making another person speak in our speech; as, David confuting the wicked magnate says, "God standeth in the congregation of the mighty. How long, will ye judge unjustly and accept persons etc." Psalm. 82.

510. A figure in dialogue is when a sentence is embellished with conversation, interrogation and reply.

511. And is deliberation, occupation, *epitrope* or *synchoraisis*.

512. Deliberatio est aporia vel anacoenosis.
513. Aporia est deliberatio nobiscum, ut Enquid agam haec causa? res hoc modo.
514. Anacoenosis est deliberatio cum aliis, ut Quid vos censetis de haec re? forsitan sic.
515. Occupatio est cum alieni consillii interrogationem occupamus eique responsionem subicimus.
516. Estque prolepsis vel prosapodosis.
517. Prolepsis objectionem proponit ut dicat aliquis hoc non est secundum regulam.
518. Prosapodosis objectioni respondit, ut, Hunc in modum respondeo bene fieri posse.
519. Epitrope est qua facti cujus piam licentiam condonamus vel serio, ut concedo hunc hominem esse bonum, justum, ac pium vel ironie, ut Insequere Italiam ventis pete regna per undas.
520. Synchoraisis est cum dictum aliquod condonetur, ut, sit fur et sacralegus at est bonus imperator.
521. Haectenens internum sequitur externum ornamentum orationis ut pronuntiatione.
522. Pronuntiatio est secunda pars rhetoricae quae est externum ornamentum orationis.
523. Estque prolatio vel actio.
524. Prolatio est pronuntiatio qua singulae dictiones et sententiae recta proferuntur.
525. Actio est qua orator quemcumque gestum rectum ac laudabile sibi ipsi accommodavit.

Finis Generalis

526. Haectenens ectypa generalis nunc specialis quae specialem habet usum.
527. Estque minus vel magis talis.
528. Minus specialis respicit quantitatem.
529. Quantitas est qua euprattomenon dicature quantum.
530. Quantum est eus a primo quatenus habet partem extra partem.
531. Estque discreta vel continua, hinc,
532. Ectypa minus specialis est vel Arithmetica vel Geometria.

512. Deliberation is either *aporia* or *anacoenosis*.
 513. *Aporia* is deliberation with ourselves; as, "What am I to do in this matter? It stands thus."
 514. *Anacoenosis* is deliberation with others; as, "What is your opinion in this matter? Perhaps this."
 515. Occupation is when we are engaged in asking another's advice and then subjoin a response to it.
 516. And is either *prolepsis* or *prosapodosis*.
 517. *Prolepsis* proposes an objection; as, "Someone may say this is not a rule to be followed."
 518. *Prosapodosis* replies to an objection; as, "I reply in this way: it can be done well."
 519. *Epitrope* is [the figure] in which we surrender freely on some point as if in earnest; as, "I admit this man is good, just and pious," or ironically; as, "Pursue Italy with the winds, attack her kingdoms through the waves."
 520. *Synchoraisis* is when something said is admitted; as, "let him be a thief, and a blasphemer, yet he is a good emperor."
 521. So far concerning the internal; now follows the external embellishment of speech, *viz.* pronunciation.
 522. Pronunciation is the second part of rhetoric, which is the external embellishment of speech.
 523. And is utterance or action.
 524. Utterance is pronunciation so that single words or sentences are rightly treated.
 525. Action is the means by which the orator manages any gesture correctly and worthily according to its own [nature].

End of the general [arts]

526. So far the general ectypal [arts] now the special, which have a special application.
 527. And they are more or less so.
 528. The less special treats of quantity.
 529. Quantity is that whose *euprattomenon* is called a quantum [or a quantity in the concrete].
 530. A quantity is a primary being in so far as it has one part outside another.
 531. And is discrete or continuous, hence,
 532. The less special ectypal arts are arithmetic and geometry.

533. Arithmetica est ars archetypa bene numerandi.⁴
534. Objectum ejus est eupraxia numerationis.
535. Eupraxia numerationis est motus regularis numerantis in numerando.
536. Explicatur ab objecto numero et regulis numerandi scil. numeratione.
537. Numerus est quantitas discreta.
538. Quantitas discreta est unitatum, multitudo numerabilis.
539. Unitas est principium numeri individuum unde incipit numerus.
540. Numerus est integer vel fractus.
541. Numerus integer est unitatum integrarum multitudo.
542. Estque digitur ut 1, 2, 3, etc. vel articulus ut 10, 20, vel compositus ut 12, 13, 14, etc.
543. Fractus est unitatum fractarum multitudo.
544. Ejus sunt et $\left\{ \begin{array}{l} \text{numerator} \\ \text{denominator} \end{array} \right. \frac{1}{2}, \frac{2}{3}, \frac{3}{4}.$
- Haec tenus numerus nunc numeratio.
547. Estque simplex vel comparativa.
548. Simplex est quae considerat numerum simplicem.
549. Estque prima vel conjuncta.
550. Prima est simplex quae numerum cum numero semel numerat.
551. Estque additio vel subductio ceu subtractio.
552. Additio est numeratio prima qua plures numeri in unum addantur et habetur totum, ut $359 + 423 = 782$. $\frac{2}{6} + \frac{2}{6} = \frac{4}{6}$.
553. Estque integri vel fracti.
554. Subtractio est qua numerus minor subducitur a majori et habetur reliquus. $329 - 248 = 81$, $\frac{5}{10} - \frac{2}{10} = \frac{3}{10}$.
555. Estque integri vel fracti.
556. Numeratio conjuncta est qua numerus numerandus toties numeratur quoties proponitur.

⁴ Numerous figures and drawings are omitted from the following sections on arithmetic and geometry. [The Editors.]

533. Arithmetic is the archetypal art of numbering well.
 534. Its object is the *eupraxia* of numbering.
 535. The *eupraxia* of numbering is the orderly procedure of counting in numbering.
 536. It is expounded by [treating] the object, number, and the rules of numbering, *viz.*, counting.
 537. A number is a discrete quantity.
 545. *Regulae numerandi sunt numerationis.*
 546. *Numeratio est numerorum operatio.*
 538. A discrete quantity is a numerable aggregation of unities.
 539. Unity is the indivisible principle of number, where number begins.
 540. A number is either an integer or a fraction.
 541. A number [is an] integer [when it] is an aggregation of integral units.
 542. And is either a digit; as 1, 2, 3, etc.; or a point of juncture; as 10, 20; or a compound number; as 12, 13, 14, etc.
 543. A fraction is an aggregation of broken units.

544. It has a
$$\left\{ \begin{array}{l} \text{numerator} \\ \hline \text{denominator} \end{array} \right. \frac{1}{2}, \frac{2}{3}, \frac{3}{4}.$$

So far number, now [we come to] counting.

545. The rules of numbering are those of counting.
 546. Counting is the operation of numbers.
 547. And is simple or comparative.
 548. It is simple when it deals with a simple number.
 549. And is primary or compound.
 550. Primary simple counting is one which counts a number with respect to another number [only] once.
 551. And is either addition or *subductio*, also called subtraction.
 552. Addition is primary counting by which several numbers are added into one and a total is produced; as $359 + 423 = 782$.
 $\frac{2}{3} + \frac{2}{3} = \frac{4}{3}.$
 553. And takes place both in integers and fractions.
 554. Subtraction is [a counting] by which a smaller number is taken from a greater and a remainder results. $329 - 248 = 81$,
 $\frac{5}{10} - \frac{2}{10} = \frac{3}{10}.$
 555. And is of both integers and fractions.
 556. Compound counting is one by which a number to be counted is counted as often as may be proposed.

557. Estque multiplicatio vel divisio.

558. Multiplicatio est numeratio coniuncta qua multiplicandus toties additur in multiplicando et habetur productus; ut —

559. et hic sunt

multiplicandus 524

multiplicantor 2

productus 1048

560. Estque integri vel fracti.

561. Divisio est qua dividens toties subducitur quoties continetur in dividendo et habetur quotus et reliquus.

562. et hic sunt:

	2	(4 reliquus
Dividendus	235	(11 quotus
Divisor	211	

2

563. Haec tenus numeratio simplex sequitur comparativa in aurea regula ceu detri.

564. Aurea regula est numeratio comparativa qua e numeris notis datis invenitur ignotus. Hic observa:

565. Si numerus tertius caeteris plus requirit tum multiplicandum est medium per majorem et dividendum per minorem.

566. Si vero minus tum multiplicandum per minorem et dividendum per majorem extremorum.

567. Aurea regula est simplex vel duplex.

568. Simplex est ubi e tribus numeris notis datis invenitur quartus ignotus, ut se 36 ulnae faciunt 3 pedes quot 72 faciunt.

72	
3	216 (6
—	36
216	

569. Duplex qua e 5 notis datis invenitur sextus ignotus ut 3 — 12 — 6 — 6 — 24 — res. 24.

557. And is multiplication or division.

558. Multiplication is compound counting in which the multiplicand is added as many times as the units contained in the multiplier, and a product is the result; as —

559. And they are thus:

multiplicand,	524
multiplier	2
	—
product	1048

560. And this is either of integers or fractions.

561. Division is [the process] by which the divisor is subtracted as many times as it is contained in the dividend and a quotient and remainder result.

562. And they are thus:

	2	(4 remainder
Dividend	235	(11 quotient
Divisor	211	
	—	
	2	

563. So far simple counting, now follows comparative in the golden rule (or "*detri*").

564. The golden rule is a comparative [method of] counting by which from given known numbers an unknown is found. Here observe:

565. If the third number calls for more than the others then the middle number is to be multiplied by the greater and divided by the lesser.

566. But if less, then [the middle number] is to be divided by the greater of the [two] extremes.

567. The golden rule is simple or complex.

568. It is simple where from three given known numbers a fourth unknown is found, as if 36 inches makes 3 feet, how many do 72 make?

72	
3	216 (6
—	36
216	

569. It is complex where from 5 given known numbers a sixth unknown is found; as 3 — 12 — 6 — 6 — 24 — ans. 24.

570. Hisce caeteris.

Finis

Haec tenus Arithmetica sequitur

571. Geometria de quantita continua.

572. Geometria est ars ectypa bene mensurandi potius debet vocari Metrica.

573. Ejus objectum est eupraxia mensurationis.

574. Eupraxia mensurationis est motus regulari mensurantis in mensurando.

575. Explicatur ab objecto magnitudine et regulis mensurandi ceu mensuratione.

576. Magnitudo est quantitas continua.

578. Terminus est magnitudinis extremum.

579. Magnitudinis sunt principium affectiones et species.

580. Principium est punctum quod est signum in magnitudine individuum.

581. Affectiones sunt absolutae vel relatae.

582. Absolutae sunt quae competunt magnitudini per se consideratae.

583. Suntque terminatio vel sectio.

584. Terminatio est affectio absoluta quae sequitur cujusque magnitudinis genesis ut qualibus terminis constat intelligere queamus.

585. Sectio est quae sequitur cujusque magnitudinis analysis ut qualibus principiis constat intelligere quaemus.

586. Affectiones relatae sunt disjunctae et sunt quae competunt magnitudini uni cum altera collatae.

587. Suntque vel ratione numeri vel magnitudinis.

588. Ratione numeri sunt symmetria vel ratio.

589. Symmetria est ratione numeri affectio relata qua magnitudines dicuntur symmetrae, tales ut eadem mensura illas exacte metiatur, assymetrae contra.

590. Ratio est qua magnitudines dicuntur rationales, i. e. tales ut earum habitudo certo numero sit explicabilis. Irrationales contra.

570. To these others might be added.

End

So far arithmetic, now follows

571. Geometry, concerning continuous quantity.

572. Geometry is the ectypal art of measuring well [and] should rather be called metrics.

573. Its object is the *eupraxia* of measurement.

574. The *eupraxia* of measurement is the orderly procedure of measuring what is to be measured.

575. It is expounded by [treating of] the object, — magnitude, and of the rules of measuring, — or measurement.

576. A magnitude is a continuous quantity.

578. A limit is the end of a magnitude.

579. A magnitude has a principle, qualities, and species.

580. Its principle is the point which is the sign of an individual magnitude.

581. Its qualities are either absolute or relative.

582. The absolute [qualities] are those which comprise magnitude considered *per se*.

583. And they are limitation and divisibility.

584. Limitation is the absolute quality which follows from the genesis of any magnitude because our ability to understand it rests on such limits.

585. Divisibility is [the quality] which follows on the analysis of any magnitude since it is because it is composed of such principles that we can understand it.

586. Relative qualities are disjunctive and are those which comprise magnitudes in their interrelations.

587. And are either by reason of number or of magnitude.

588. Those by reason of number are either commensurate or rational.

589. Being commensurate by reason of number is a relative quality by which magnitudes are called commensurate, such as the same measure will exactly measure. Incommensurate the opposite.

590. Ratio is the property by which magnitudes are called rational, *i. e.*, such as have a structure explicable by a certain number. Irrationals the opposite.

591. Ratione magnitudinis sunt contactus et sectio vel congruentia et adscriptio.
592. Contactus est ratione magnitudinis affectio relata qua magnitudines ita concurrunt ut continuat et non intersecuntur. Incontactus contrarium.
593. Sectio est qua minimum unius magnitudinis seriat minimum alterius. Alia contra.
594. Congruentia est qua fit ut prima primis, media mediis, extrema extremis usque quoque respondeant. Incongruentia contra.
595. Adscriptio est qua fit ut terminus unius magnitudinis terminus alterius terminetur.
596. Estque inscriptio vel circumscriptio.
597. Inscriptio est qua magnitudo quae intra est dicitur inscripta.
598. Circumscriptio est qua magnitudo quae extra est dicitur circumscripta.
599. Haecenus generalia nunc species. Magnitudo est linea vel lineatum.
600. Linea est magnitudo tantum longa. Ejus terminus est punctum.
601. Estque absoluta vel comparata.
602. Absoluta est simplex vel mixta.
603. Simplex est recta vel curva.
604. Recta est simplex quae aequaliter intra suos terminos interiacet.
605. Curva quae inaequaliter.
606. Estque peripheria vel helix.
607. Peripheria est curva quae aequaliter distat a centro comprehensi spatii.
608. Helix quae inaequaliter.
609. Mixta est absoluta composita ex recta et curva.
610. Linea comparata comparatur vel ad aliam lineam vel ad lineatum.
611. Ad aliam lineam comparatam est parallela, perpendicularis, proportionalis, vel neutra harum.
612. Parallela est linea ad aliam comparata quae ubique distat aequaliter ab illa.

591. Those by reason of magnitude are of contact and division, or comparability and ascription.
592. Contact is a relative quality of a rational magnitude by which magnitudes are so placed together that there is a continuity but no intersection. Non-contact, the contrary.
593. Division is [the quality] by which a minimum of one quantity connects with the minimum of another. Otherwise the contrary.
594. Comparability is [the quality] which causes that the beginning of one corresponds to the beginning of the other, the middle to the middle, and end to end. Incomparables the opposite.
595. Ascription is the [quality] which causes the limits of one magnitude to be limited by the limits of the other.
596. And is either inscription or circumscription.
597. Inscription is the quality by which the inner magnitude is said to be inscribed.
598. Circumscription is the quality by which the outer is said to be circumscribed.
599. So far general considerations, now the species. A magnitude is a line or else a figure composed of lines.
600. A line is a magnitude which is merely long. Its limit is a point.
601. It is either absolute or relative.
602. An absolute [line] is simple or mixed.
603. A simple line is straight or curved.
604. A straight line is a simple line which lies equally between its limits.
605. A curve lies unequally.
606. And is either a periphery or a helix.
607. A periphery is a curve which is equidistant from the center of the enclosed space.
608. A helix is not equidistant.
609. A mixed line is an absolute line composed of both straight and curved.
610. A relative line is related either to another line or to a [figure] composed of lines.
611. When relative to another line it is either parallel, perpendicular, proportional or none of these.
612. A parallel line is a line relative to another which is everywhere equidistant from it.

- 613. Perpendicularis est recta directa incidens in rectum.
- 614. Proportionalis est quae convenit cum alia in rationum aequalitate.
- 615. Linea ad lineatum comparata comparatur ad superficiem vel solidum; Una in superficiem, alia in corpus ducitur.
- 616. Haec tenus linea jam lineatum. Lineatum est magnitudo plusquam longa, dicitur figura.
- 617. Tractatur in genere et specie.
- 618. In genere considerantur anguli et proprietates.
- 619. Angulus est concursus terminorum seu crurum.
- 620. Estque homogeneus vel heterogeneus.
- 621. Homogeneus est qui oritur ex concursu linearum ejusdem generis.
- 622. Estque rectilineus vel curvilineus.
- 623. Rectilineus est homogeneus qui oritur ex concursu linearum rectarum.
- 624. Estque rectus vel obliquus.
- 625. Rectus est rectilineus cuius crura sunt ad perpendicularum erecta.
- 626. Obliquus contra.
- 627. Estque obtusus vel acutus.
- 628. Obtusus est obliquus major recto.
- 629. Acutus est obliquus minor recto.
- 630. Curvilineus est quo oritur ex concursu linearum curvarum.
- 631. Heterogeneus est qui oritur ex concursu linearum diversae generis.
- 632. Proprietates respiciunt unicam eius regionem vel totam figuram.
- 633. Prioris generis sunt centrum, perimeter, radius, diameter et altitudo.
- 634. Centrum est punctum in figurae medium.
- 635. Perimeter est comprehensio figurae.
- 636. Radius est recta a centro figurae ad perimetrum.
- 637. Diameter est recta a perimetro per centrum ad perimetrum.


613. A perpendicular line is a straight line running straight into a straight line.
614. A proportional line is one which varies with another in an equal ratio.
615. A line relative to a [figure] composed of lines is related either to a surface or a solid; the one leads to a surface, the other to a body.
616. So far lines, now what is composed of lines. A thing composed of lines is a magnitude more than merely long. It is called a figure.
617. It will be discussed in relation to its genus and its species.
618. In relation to its genus there are considered angles and properties.
619. An angle is an intersection of sides or legs.
620. And is homogeneous or heterogeneous.
621. It is homogeneous when it is formed by the intersection of lines of the same kind.
622. And is either rectilinear or curvilinear.
623. A rectilinear angle is a homogeneous angle formed by the intersection of straight lines.
624. And is right or oblique.
625. A right angle is one whose legs are perpendicular to each other.
626. Oblique, the opposite.
627. And is either obtuse or acute.
628. An obtuse angle is greater than a right angle.
629. An acute angle is less than a right angle.
630. A curvilinear angle is formed by the intersection of curved lines.
631. A heterogeneous angle is one which is formed by the intersection of lines of different kinds.
632. The properties pertain either to a part or to the whole figure.
633. Of the first kind are center, perimeter, radius, diameter, and altitude.
634. The center is a point in the middle of the figure.
635. The perimeter is what bounds the figure.
636. The radius is a straight line from the center of the figure to the perimeter.
637. The diameter is a straight line from the perimeter through the center to the perimeter.

638. Altitudo est perpendicularis a vertice figurae ad basin.
639. Proprietates totius figurae sunt absolutae vel relatae, utraeque disjunctae.
640. Absolutae sunt ordinatio primatus et ratio.
641. Figurae ordinatae sunt aequiterminae et aequangulatae. Inordinatae contra.
642. Figura prima est in alias simpliciores ipsa individua. Composita contra.
643. Figura rationalis comprehenditur a base et altitudine rationalibus inter se. Irrationalis contra.
644. Affectiones ceu proprietates relatae sunt isoperimetria, similitudo et proportio.
645. Figurae isoperimentriae sunt aequalis perimetri. Anisoperimetriae contra.
646. Figurae similes sunt quae habent aequales angulos sub homologis terminis comprehensos. Dissimiles contra.
647. Proportionales sunt quae eandem inter se dimensionum habitudinem habent. Improportionales contra.
648. Haecenus generalia jam species lineatum — ceu figura est superficies vel corpus.
649. Superficies est lineatum longum et latum.
650. Ejus terminus est linea.
651. Estque plana vel gibba.
652. Superficies plana est qua aequaliter inter suos terminos interjacet.
653. Estque rectilinea vel curvilinea.
654. Rectilinea est plana a lineis rectis comprehensa.
655. Estque triangulum vel triangulatum.
656. Triangulum est plana rectilinea tribus constans lineis rectis vel triangulum est plana rectilinea a tribus angulis comprehensa vel tres habens angulos.
657. Estque divisa vel ratione laterum vel angulorum.
658. Ratione laterum est aequilaterum vel aequierurum vel varium.
659. Aequilaterum est triangulum quod omnia habet latera aequalia.
660. Aequierurum est quod duo tantum aequalia latera habet.
661. Varium quod nulla aequalia habet.
662. Ratione angulorum est triangulum vel rectangulum vel obliquangulum.

638. The altitude is a perpendicular from the vertex of the figure to the base.
639. The properties of the whole figure are either absolute or relative, both disjunctive properties.
640. The absolute are order, primariness and rationality.
641. Ordered figures are equilateral and equiangular. Unordered, the opposite.
642. A primary figure is indivisible into other simpler figures. Composite the opposite.
643. A rational figure is bounded by a base and altitude which are commensurate. An irrational, the opposite.
644. The affects or relative properties are isoperimetricity, similarity and proportion.
645. Isoperimetric figures have equal perimeters. Anisoperimetric, not.
646. Similar figures have equal angles subtended by proportional sides. Dissimilar, the opposite.
647. Proportional [figures] are those which have the same ratio between their various dimensions. Unproportional, the opposite.
648. So far general considerations; now the species, *i. e.*, a figure is either a surface or a solid.
649. A surface is a figure with length and width.
650. Its side is a line.
651. And is plane or humped.
652. A plane surface is one which lies smoothly between its sides.
653. And is rectilinear or curvilinear.
654. A rectilinear plane is bounded by straight lines.
655. And is a triangle or composed of triangles.
656. A triangle is a rectilinear plane consisting of three straight lines, or a triangle is a rectilinear plane composed of three angles or having three angles.
657. And is classified according to its sides or its angles.
658. According to its sides it is equilateral, isosceles, or varied.
659. An equilateral triangle is one whose sides are all equal.
660. An isosceles triangle has only two of its sides equal.
661. A varied triangle has none equal.
662. According to its angles a triangle is either right-angled or oblique-angled.

663. Triangulum rectangulum est quod unicum angulum habet rectam.
664. Obliquangulum quod nullum.
665. Estque obliquangulum vel obtusanguum vel acutangulum.
666. Obtusangulum quod unicum angelum habet obtusum.
667. Acutangulum est quod omnes habet angulos acutos.
668. Triangulatum est rectilinea e triangulis composita.
669. Estque quadrangulum vel multangulum.
670. Quadrangulum est triangulatum constans e quatuor lineis rectis.
671. Estque parallelogrammum vel trapezium.
672. Parallelogrammum est quadrangulum lateribus oppositis parallelum.
673. E_us sunt membra et species.
674. Membra sunt diagonius et bina tum diagonalia tum complementa tum gnomona.
675. Diagonius est diameter contigens duos angulos.
676. Diagonale est particulare parallelogrammum a comminus anguli et diagonii cum toto parallelogrammo.
677. Complementum est particulare parallelogrammum conterminis diagonalium lateribus comprehensum.
678. Gnomon est alterium diagonale cum duobus complementis.
679. Species ita trabent, Parallelogrammum est rectangulum vel obliquangulum.
680. Rectangulum est parallelogrammum omnes habens angulos rectos.
681. Estque ille vel quadratum vel oblongum.
682. Quadratum est rectangulum aequilaterum.
683. Oblongum est rectangulum inaequilaterum.
684. Obliquangulum omnes habet angulos obliquos.
685. Estque rhombus vel rhomboides.
686. Rhombus est obliquangulum aequilaterum.
687. Rhomboides inaequilaterum.
688. Trapezium est quadrangulum non-parallelogrammum.
689. Multangulum est triangulatum pluribusquam quatuor lineis rectis comprehensum.



663. A right-angled triangle has one right angle.
664. An oblique-angled triangle has none.
665. An oblique-angled triangle is either an obtuse-angled triangle or acute-angled.
666. An obtuse-angled triangle has one angle obtuse.
667. An acute-angled triangle has all its angles acute.
668. A trigonometric figure is a rectilinear figure composed of triangles.
669. And is a quadrangle or a polygon.
670. A quadrangle is a trigonometric figure consisting of four straight lines.
671. And is either a parallelogram or a trapezium.
672. A parallelogram is a quadrangle whose opposite sides are parallel.
673. It has parts and kinds.
674. Its parts are the two diagonals, forming in turn quadrants, complements, and *gnomona*.
675. A diagonal is the diameter between two angles.
676. A quadrant is a part consisting of a parallelogram with its angles and diagonals like those of the whole parallelogram.
677. A complement is a part consisting of a parallelogram of quadrants bounded by coinciding sides.
678. A *gnomon* is the other quadrant with two complements. 
679. The species are as follows: A parallelogram is either a rectangle or an oblique parallelogram.
680. A rectangle is a parallelogram having all its angles right angles.
681. And it is either a square or an oblong.
682. A square is an equilateral rectangle.
683. An oblong is an unequilateral rectangle.
684. An oblique-angle has all its angles oblique.
685. And is either rhombus or rhomboid.
686. A rhombus is an equilateral oblique-angle.
687. A rhomboid unequilateral.
688. A trapezium is a non-parallel quadrangle.
689. A polygon is a figure composed of triangles bounded by more than four straight lines.

690. Haectenus superficies rectilinea, nunc curvilinea quae a lineis curvis comprehenditur.
691. Estque simplex ceu circulus ceu mixta quae est varia ut in ovalibus sunt.
692. Circulus est planum rotundum.
693. Circuli sunt lineae et segmenta.
694. Lineae circuli sunt inscriptae vel adscriptae.
695. Lineae inscriptae sunt diameter vel adiameter.
696. Diameter est recta inscripta per centrum circuli.
697. Adiameter sunt chorda, sinus vel secans.
698. Chorda est recta arcum quemcunque subtendens.
699. Sinus est radius vel semi-diameter circuli quandoque triangulum conficit cum secante et tangente dicitur sinus totus.
700. Dantur et sinus rectus et versus.
701. Sinus rectus est dimidium chordae.
702. Sinus versus est pars diametri secantis chordam.
703. Secans est recta inscripta per peripheriae terminum et ad tangentem usque continuata.
704. Tangens ceu adscripta est recta extra peripheriam a radio aliquo perpendiculariter erecta et ad secantem continuata.
705. Segmentum circuli est quod comprehenditur a peripheria et linea recta.
706. Estque sector vel sectio.
707. Sector est segmentum a linea duplici angulum faciente in centro vel in peripheria comprehensum.
708. Sectio est segmentum comprehensum a peripheria et linea quae est chorda et dicitur basis sectionis.
709. Estque semi-circulus vel semicirculo inaequalis.
710. Adhuc superficies plana. Sequitur gibba quae inaequaliter inter suos terminos interjacet.
711. Estque sphaerica vel varia.
712. Sphaerica est gibba aequi distans a centro comprehensi spaci.
713. Varia est gibba cujus basis est peripheria et latus linea recta.
714. Estque conica vel cylindrarea.

690. So far rectilinear surfaces; now curvilinear, which are bounded by curved lines.
691. They are simple, or circles, or mixed, which includes the various kinds of ovals.
692. A circle is a round plane.
693. A circle has lines and segments.
694. The lines of a circle are inscribed or ascribed.
695. The inscribed lines are diameters and non-diameters.
696. A diameter is a straight line inscribed through the center of the circle.
697. Non-diameters are chords, sines, and secants.
698. A chord is a straight line subtending some arc.
699. A sine is a radius or semi-diameter of a circle and when it makes a triangle together with the secant and tangent it is called the whole sine.
700. There are sines proper and cosines.
701. The sine proper is half a chord.
702. The cosine is the part of the diameter cutting the chord.
703. The secant is a straight line inscribed through the edge of the circumference and continued out to the tangent.
704. The tangent or ascribed line is a straight line outside the circumference drawn perpendicular to a radius and continued to the secant.
705. A segment of a circle is what is bounded by the circumference and a straight line.
706. And is either a sector or a section.
707. A sector is a segment bounded by a double line making an angle in the center or in the circumference.
708. A section is a segment bounded by the circumference and a line which is a chord and is called the base of the section.
709. It is a semicircle or something unequal to a semicircle.
710. So far plane surfaces. There follows a [discussion of] uneven surfaces, which lie unevenly between their boundaries.
711. And are spheres or else various [other] forms.
712. A sphere is an uneven surface equidistant from the center of the space bounded.
713. The various forms are those whose base is a circumference and side a straight line.
714. And are cones or cylinders.

715. Conica est quae a subjecta, peripheria ad verticem aequaliter fastigiatur.
716. Cylindrarea est quae a subjecta peripheria hic sublimen aequalem parallelam aequaliter erigitur.
717. Haec tenus superficies sequitur corpus. Corpus est figura ceu lineatum longum latum et profundum ceu altum.
718. Ejus terminus est superficies.
719. Estque planum vel gibbum.
720. Planum est corpus quod comprehenditur a superficieis planis.
721. Estque pyramis vel pyramidatum.
722. Pyramis est planum quod a basi triangularo triangulis fastigiatur.
723. Estque aequitermina vel inaequitermina.
724. Pyramis aequitermina est qua comprehenditur a quatuor triangulis aequilateris.
725. Inaequitermina a quatuor triangulis inaequilateris comprehenditur.
726. Pyramidatum est corpus planum a pyramidibus compositum.
727. Estque prisma vel polyedrum mistum.
728. Prisma est pyramidatum cujus opposita plana sunt aequalia similia parallela reliqua parallelogramma.
729. Estque pentedrum vel pentedratum.
730. Pentedrum est prisma quinque constans hedris ceu lateribus.
731. Pentedratum est prisma e pentedris compositum.
732. Estque hexedrum vel polydram.
733. Hexedrum est pentedratum sex hedris quadrangulis constans.
734. Estque parallelopipedum vel trapezium.
735. Parallelopipedum est hexedrum cujus opposita plana sunt parallelogramma.
736. Estque rectangulum vel obliquangulum.
737. Rectangulum est cubus vel oblongum.
738. Cubus est parallelopipedum rectangulum aequilaterum.
739. Oblongum est rectangulum inaequilaterum.
740. Obliquangulum est rhombus vel rhomboides.
741. Rhombus est obliquangulum aequilaterum.
742. Rhomboides inaequilaterum.

715. A cone is [a form] which is based on a circumference whence it is drawn evenly to a point, vertex.
716. A cylinder is one which is based on a circumference above which lies an equal and parallel [circumference] set up by straight [lines].
717. So far surfaces; now follow solids. A solid is a figure or shape which is long, wide, and deep or high.
718. Its boundary is a surface.
719. And is plane or uneven.
720. A plane solid is bounded by plane surfaces.
721. And is a pyramid or compounded of pyramids.
722. A pyramid is a plane solid which, from a triangular base rises to a point by triangles.
723. And is equiterminous or non-equiterminous.
724. An equiterminous pyramid is one bounded by four equilateral triangles.
725. A non-equiterminous pyramid is bounded by four non-equilateral triangles.
726. A pyramidatum is a plane solid made of pyramids.
727. And is a prism or a mixed polyhedron.
728. A prism is a solid composed of pyramids whose opposite planes are equal, similar, parallel parallelograms.
729. And is a pentahedron or a pentedratum.
730. A pentahedron is a prism consisting of five "hedruses" or sides.
731. A pentedratum is a prism made of pentahedrons.
732. And is a hexahedron or polyhedron.
733. A hexahedron is a pentedratum consisting of six quadrilateral sides.
734. And is either a parallelopipedon or a trapezium.
735. A parallelopipedon is a hexahedron whose opposite planes are parallelograms.
736. And is rectangular or oblique-angular.
737. A rectangular one is a cube or an oblong.
738. A cube is a rectangular and equilateral parallelopipedon.
739. An oblong is a non-equilateral rectangular one.
740. An oblique-angular one is a rhombus or a rhomboid.
741. A rhombus is an equilateral one.
742. A rhomboid is non-equilateral.

743. Trapezium est cujus opposita plana neque aequalia neque parallelogramma.
744. Polyedrum pentedratum est quod quibusquam sexedris constat.
745. Polyedrum mistum est quod pyramidatum cum positum a pyramidibus vertice centro coeuntibus sola basi sua eminentibus.
746. Haectenus corpus planus. Sequitur gibbum. Gibbum est quod comprehenditur a superficia gibba.
747. Estque sphaera vel varium.
748. Sphaera est gibbum rotundum.
749. Ejus variae sunt lineae ut horizon, meridianus, aequator, zodiacus, colori duo, tropici duo, et polares duo.
750. Varium est gibbum quod comprehenditur a superficie varia.
751. Estque conus vel cylindrus.
752. Conus est varium quod a conica superficie et basi comprehenditur.
753. Cylindrus est varium a superficie cylindracea et oppositis basibus comprehensum.
754. Haectenus de objecto scil. magnitudine. Sequuntur regulae mensurandi quae sunt mensuratio.
755. Mensuratio est magnitudinum descriptio et contentorum inventio.
756. Descriptio est mensuratio qua magnitudines limitantur.
757. Contentorum inventio est qua invenimus quod pedes vel ulnas etc. magnitudo aliqua continet.
758. Et fit vel per immediatam applicatione vel per infallibilem conclusionem.
759. Hic adhibentur regulae arithmeticae.
760. Hac declaratione ceu demonstratione cognoscuntur contenta singularum linearum, superficiei, et solidorum.
761. Linearum tum longitudinem vel distantiam et altitudinem hoc modo ut se habet $ED = 5$; $DC = 6$, ita $DB = 15$: $AB = 18$ per regulam Detri ceu proportionis.
762. Superficieum areae sunt (1) trianguli per multiplicationem basis per $\frac{1}{2}$ perpendiculi.

743. A trapezium is one whose opposite planes are neither equal nor parallelograms.
744. A pentedrate polyhedron is composed of several hexahedrons.
745. A mixed polyhedron is formed when a pyramidatum is so arranged that the pyramids converge at their vertices as a center, rising from a single base.
746. So far for plane solids. Now follow the uneven. An uneven solid is one bounded by a non-plane surface.
747. And is a sphere or a varied solid.
748. A sphere is a non-plane solid that is round.
749. Its various parts are lines, as the horizon, the meridian, equator, zodiac, two colores, two tropics, and two poles.
750. A varied solid is one bounded by a varied surface.
751. And is either a cone or a cylinder.
752. A cone is a varied solid which is bounded by a conical surface and a base.
753. A cylinder is a varied solid, bounded by a cylindrical surface and by bases opposite each other.
754. So far concerning the object, *viz.*, magnitude. There follow the rules of measuring, which are mensuration.
755. Mensuration is the description of magnitudes and the calculation of contents.
756. Description is the system of measurements by which magnitudes are limited.
757. The calculation of contents is that by which we discover how many feet or inches, etc., a magnitude contains.
758. And [this is] done by immediate application or else by infallible [reasoning to] a conclusion.
759. To the former belong the rules of arithmetic.
760. By the latter, declaration or demonstration, the contents of single lines, surfaces, and solids are known.
761. [The contents] of lines, whether length or distance or height, by this method as follows: if ED [the base of a triangle] = 5; DC [its altitude] = 6, then if DB [the base of a larger similar triangle] = 15, AB [its altitude] = 18, by the rule *Detri* or of proportion.
762. The areas of surfaces are: (1) Of a triangle, by multiplication of the base by $\frac{1}{2}$ the altitude.

763. (2) Quadrati et oblongi multiplicando basin per perpendicularum.

764. (3) Rhombi, Rhomboidei, trapezii, et multanguli resolvendo in triangula.

765. (4) Circuli multiplicando $\frac{1}{2}$ perimetri per radium. Hic ut se habet 7 ad 44. Diameter ad perimetrum vel ut 113 ad 355 ita diameter ad perimetrum.

766. (5) Sectoris multiplicando radium in $\frac{1}{2}$ basis. Sectionis per triangulam.

767. (6) Sphaericae multiplicando diametrum in perimetrum.

768. (7) Conicae multiplicando $\frac{1}{2}$ maximi perimetri per latus.

769. (8) Cylindraecae multiplicando altitudinem per perimetrum.

770. Solidorum. (1) Pyramidis multiplicando superficiem basis per $\frac{1}{3}$ altitudinis.

771. (2) Pentadrae multiplicando superficiem basis per altitudinem.

772. (3) Cubi et oblongi multiplicando tria latera inter se, ceu multiplicando aream con altitudinem, basin per perpendicularum.

773. (4) Reliquorum pyramidatorum resolvendo in pyramides, etc.

774. (5) Sphaerae multiplicando diametrae in $\frac{1}{6}$ superficiei sphaericae.

775. (6) Coni multiplicando basin per $\frac{1}{3}$ altitudinis ut pyramidis.

776. (7) Cylindri multiplicando basis aream per altitudinem ut pentadrae, etc.

finis declaratio ceu demonstratio

777. Haec tenus minus. Sequuntur major specialis, scil, Physica vel Theologia.

778. Physica versatur cum qualitate qua euprattomenon dicatur quale.

779. Physica est ars extypa bene naturandi.

780. Objectum ejus est eupraxia naturalis.

763. (2) Of square and oblong by multiplying the base by the altitude.

764. (3) Of a rhombus, a rhomboid, a trapezium, and a polygon, by resolving them into triangles.

765. (4) Of a circle by multiplying $\frac{1}{2}$ the circumference by the radius. This is in the ratio of 7 to 44. The diameter is to the circumference as 113 is to 355.

766. (5) Of a sector by multiplying the radius by $\frac{1}{2}$ the base. Of a section by triangles.

767. (6) Of a sphere by multiplying the diameter by the circumference.

768. (7) Of a conical surface by multiplying $\frac{1}{2}$ the largest circumference by the side.

769. (8) Of a cylindrical surface by multiplying the altitude by the circumference.

770. [The volume] of solids: (1) Of a pyramid by multiplying the surface of the base by $\frac{1}{3}$ the altitude.

771. (2) Of a pentahedron by multiplying the surface of the base by the altitude.

772. (3) Of a cube or oblong by multiplying the three sides by each other, or by multiplying the area by the altitude, or the base by the perpendicular.

773. (4) Of the remaining figures composed of pyramids, by resolving them into pyramids, etc.

774. (5) Of the sphere by multiplying the diameter by $\frac{1}{6}$ the surface of the sphere.

775. (6) Of a cone, by multiplying the base by $\frac{1}{3}$ the altitude, the same as of the pyramid.

776. (7) Of a cylinder by multiplying the area of the base by the altitude, the same as of a pentahedron, etc.

End [of] the Declaration or Demonstration.

777. So far the less special, now follow the more special [arts], viz., physics, and theology.

778. Physics is concerned with quality, whose *euprattomenon* may be called a concrete quality.

779. Physics is the ectypal art of analyzing things well into their natures.

780. Its object is the *eupraxia* of natures.

781. Eupraxia naturalis est motus regularis naturantis in naturando.
782. Explicatur ab euprattomeno unde colliquantur regulae naturandi.
783. Euprattomenon est natura naturato.
784. Natura naturata est ens a primo substantiale.
785. Ejus sunt principia, affectiones et species.
786. Principia sunt materiale et formale.
787. Materiale est principium quod est substantiale naturam naturatam materials.
788. Formale est principium naturam naturatam informans. Haec forma est accidentalis tantum modificatio materiae.
789. Affectiones sunt quantitas, qualitas, continuitas, figura, crassities vel tenuitas, gravitas, mobilitas, localitas, et temporalitas.
790. Quantitas est affectio naturae naturatae qua est ad certum molem ut mens[uram].
791. Qualitas est qua natura naturata edit varias actiones et operationes.
792. Substantialitas est qua natura est tertium quid a materia et forma constatum.
793. Continuitas est qua naturae particulae ita sunt compactae ut non datur superficies sensibiliter distincta.
794. Figura est extremus terminus naturae.
795. Crassities et tenuitas sunt quibus natura habet multum materiae sub parva quantitate vel parvum materiae sub multa quantitate comprehensum.
796. Gravitas est qua natura inclinatur deorsum. Levitas absoluta non datur.
797. Mobilitas est qua natura est mobilis.
798. Motus vero est progressio successiva a termino a quo ad terminum ad quem.
799. Localitas est qua natura est in loco.
800. Locus est superficiei corporis ambientis locatum quibusdam spatium rei locatae.
801. Temporalitas est qua natura est temporalis.
802. Tempus vero est duratio creaturae successiva. Quibusdam mora rei in existendo.

781. The *eupraxia* of natures is an orderly procedure of analyzing the natures of natural things.
782. It is expounded by its *euprattomenon*, hence are collected the rules of natural [analysis].
783. Its *euprattomenon* is a natural product of nature.
784. A natural product of nature is a being primarily substantial.
785. It has principles, modes, and species.
786. Its principles are material and formal.
787. The material principle is what is substantial, furnishing the material for a natural product of nature.
788. The formal principle is what furnishes form for a natural product of nature. This form is merely an accidental modification of the material.
789. Its modes are quantity, quality, continuity, figure, density or tenuity, weight, mobility, locality, and temporal order.
790. Quantity is a mode of a natural product of nature by which it is of a certain mass and measure.
791. Quality is that by which a natural product of nature gives forth various actions and operations.
792. Substantiality is that by which a nature is a third something in addition to the material and form of which it consists.
793. Continuity is that by which the particles of a natural [thing] are so compact that there is no surface which is sensibly discrete.
794. Figure is the outside limit of a natural [thing].
795. Density and tenuity are those by which a natural [thing] has much matter contained within a small quantity or little matter within a large quantity.
796. Weight is that by which a natural thing inclines downwards. There is no such thing as absolute lightness.
797. Mobility is that by which a natural thing is mobile.
798. And motion is the successive advance from a terminus *a quo*, to a terminus *ad quem*.
799. Location is that by which a natural thing is in a place.
800. Place is where the surface of a moving body is placed. According to some the space of the located thing.
801. Temporal order is that by which a natural thing is temporal.
802. And time is the successive duration of a creature. According to some the period of delay involved in a thing's existing.

805. Haec tenus principia et affectiones sequuntur species. Natura naturata est constans vel inconstans.
804. Natura constans est qua cum principiis concreatis immediate perfecta fuit.
805. Estque coelum supremum vel spiritus.
806. Coelum supremum est natura in habitaculum justorum gloriose factum est. Est praesentia omnis boni et absentia omnis mali.
807. Spiritus est natura constans viviens, intelligens, ac volens.
808. Ejus sunt facultates et species.
809. Facultates sunt vita, intellectus, et voluntas.
810. Vita est actus vivificantis in vivificatum ex unione utriusque.
811. Intellectus est facultas spiritus qua objecta tam universalialia quam singularia ut vera vel falsa cognoscit et dijudicat.
812. Intellectus actus sunt apprehensio, cognitatio, vel memoria seu recognitio, i. e., cognoscere, dijudicare, et recognoscere.
813. Voluntas est facultas spiritus qua objecta ab intellectu percepta ac dijudicata ut bona libere appetit vel ut mala aversatur.
814. Actus ejus sunt velle et nolle.
815. Affectus rationales sunt voluntatis actus.
816. Spiritus est angelus vel anima humana.
817. Angelus est spiritus non factus inesse corpori, natura nobilior.
818. Anima humana seu rationalis est spiritus factus inesse corpori; natura ignobilior.
819. Haec tenus natura constans nunc inconstans quae ex massa illa prima informis et inani in praestantiorum ordinem et pulchritudinem reducta fuit.
820. Ejus sunt affectiones et species.
821. Affectiones sunt generatio, corruptio, augmentatio, vel diminutio.
822. Generatio est naturae inconstantis constructio.
823. Corruptio est ejusdem.
824. Augmentatio est rei generatae alicujus additus.
825. Diminutio est a re generata alicujus ablatio.

803. So far principles, and modes; there follow the species. A natural product of nature is either eternal or perishable.
804. An eternal nature is one which together with its principles was made immediately perfect.
805. And is the highest heaven and spirit.
806. The highest heaven is the eternal natural [thing] gloriously made for the habitations of the just. It is the presence of all good and the absence of all evil.
807. The spirit is an eternal natural [thing] living, knowing, and willing.
808. It has faculties and species.
809. Its faculties are life, intellect, and will.
810. Life is the act of the vivifier in the vivified by the union of both.
811. The intellect is the faculty of the spirit by which it knows and judges objects, universals, as well as particulars, both true and false.
812. The acts of the intellect are apprehension, thought, and memory or recognition, *i. e.*, to know, to judge, to recognize.
813. Will is the faculty of the spirit by which the objects perceived and judged by the intellect are the goods freely sought and the evils avoided.
814. Its acts are to be willing and unwilling.
815. The rational affects are acts of the will.
816. A spirit is either an angel or the human soul.
817. An angel is a spirit not made to be in a body, nobler by nature.
818. The human or rational soul is a spirit made to dwell in a body; by nature baser.
819. So far eternal nature, now perishable, which was fashioned out of that primal, lifeless, formless, mass into magnificent order and beauty.
820. It has modes and species.
821. Its modes are generation, decay, growth, and decline.
822. Generation is the construction of a perishable nature.
823. Decay is its destruction.
824. Growth is the addition of something to the thing generated.
825. Decline is the subtraction of something from the thing generated.

826. Natura inconstans est elementaria atomus vel elementatum.
827. Atomus elementariae sunt naturae inconstantes ex quibus elementata conmixta fiunt et in quas resolvenda demum sunt.
828. Atomus sunt minima illa physica et prima illa naturalia.
829. Elementorum sunt qualitates et species.
830. Qualitates sunt calor et frigus, humiditas vel siccitas.
831. Calor est qualitas elementi calfaciens, congregans, homogenea et segregans heterogenea.
832. Frigus est qualitas frigefaciens, congregans homogenea et heterogenea non segregans.
833. Humiditas est qualitas humectans suo termino difficulter se continens.
834. Siccitas est qualitas exsiccans suo termino facile se continens.
835. Elementum est calidius vel frigidius.
836. Calidius est ignis vel aëra.
837. Ignis est elementum calidissimum et siccum.
838. Aer est elementum humidissimum et calidum.
839. Frigidius est aqua vel terra.
840. Aqua est elementum frigidissimum et humidum.
841. Terra est elementum siccissimum et frigidum.
842. Ad huc elementa nunc elementata. Elementatum est natura inconstans ex mixture atomorum factum.
843. Ejus sunt affectiones et species.
844. Affectiones sunt mistio, temperamentum. Qualitates inde ortae porositas densitas et raritas.
845. Mistio est miscibilium alterius in alterum unio perfecta vel imperfecta.
846. Temperamentum est apta dispositio calidi et frigidi cum certa proportionem humidi et siccis.
847. Estque aequale vel inaequale.
848. Aequale est temperamentum ad pondus.
849. Inaequale ad justitiam [?].
850. Estque simplex vel compositum.
851. Simplex est ubi una aliqua qualitas dominatur, cholericum, sanguineum, phlegmaticum, melancholicum.

826. Perishable nature is either elementary atoms or what is composed of elements.

827. Elementary atoms are the perishable natures out of which elements and compounds are made, and into which they are at last resolved.

828. Atoms are the smallest of all physical things, and the first of all natural things.

829. Elements have qualities and species.

830. The qualities are heat and cold, humidity, and dryness.

831. Heat is the quality of an element making it hot, drawing together the homogeneous and segregating the heterogeneous.

832. Cold is the quality making cold, drawing together the homogeneous and not segregating the heterogeneous.

833. Humidity is the moist quality, with it gone (it is) difficult to hold together.

834. Dryness is the drying out quality, with it gone it is easy to hold together.

835. An element is hotter or colder.

836. The hotter are fire and air.

837. Fire is the hottest element and dry.

838. Air is the wettest element and hot.

839. The colder are water and earth.

840. Water is the coldest element and wet.

841. Earth is the driest element and cold.

842. So far elements; now the things composed of elements. They are perishable natures made from a mixture of atoms.

843. They have modes and species.

844. Their modes are mixture and temperament. Hence arise the qualities of porosity, density, and rarity.

845. A mixture is the fusion of one thing with another into a union either perfect or imperfect.

846. Temperament is the proper distribution of hot and cold with a certain proportion of wet and dry.

847. And is equal or unequal.

848. An equal temperament inclines toward weight.

849. An unequal towards justice [?].

850. And is simple or compound.

851. Simple is where one quality is dominated by another, as choleric, sanguine, phlegmatic, melancholic.

852. Compositum cum plures una.
853. Qualitates ortae sunt occultae vel manifestae.
854. Occultae sunt quorum causa est difficilior inventis.
855. Suntque sympathia vel antipathia.
856. Sympathia est miranda quaedam inter res quasdam consentio ut magnes et ferrum.
857. Antipathia est dissensio aequae mirabilis ut elephantaus et mus, leo et gallus.
858. Qualitates manifestae sunt quorum causa est faciliior inventis.
859. Suntque visibilitas, audibilitas, olfactilitas, gustibilitas, et tactilitas.
860. Visibilitas est qualitas manifesta a colore.
861. Color est qualitas ex certa dispositione pellucidi et opaci.
862. Audibilitas est a sono.
863. Sonus est qualitas quae est capacitas corporis per collisionem edendi talem vel talem sonum in undula.
864. Olfactilitas est ab odore.
865. Odor est qualitas siccae et sapidae cum collida contemperatione.
866. Gustibilitas est a sapor.
867. Sapor est ejusdem contemperationis cum priore.
868. Tactilitas est a qualitatibus tactilibus quae sunt molities ducities.
869. Porositas est affectio misti qua porosum est.
870. Pori vero sunt foramina parvula in misto quibus pervium et penetrabilis est.
871. Densitas est affectio ex paucitata et parvitata pororum.
872. Raritas ex magnitudine et multitudine pororum orta.
873. Nunc species elementarum ceu mistum est inanimatum vel animatum.
874. Inanimatum est mistum sine anima.
875. Estque meteoron vel fossile.
876. Meteorum est inanimatum imperfectae mistionis ideoque ut cito fit ita subito perit.
877. Ejus sunt principia et species.
878. Principia sunt fumus et vapor.
879. Fumus est exhalatio arrida et sicca.

- 852. Compound where more than one.
- 853. The consequent qualities are occult or manifest.
- 854. The occult are those whose cause it is difficult to discover.
- 855. And these are sympathy or antipathy.
- 856. Sympathy is a certain wonderful attraction between certain things; as magnet and iron.
- 857. Antipathy is an equally wonderful disagreement; as elephant and mouse, lion and cock.
- 858. The manifest qualities are those whose cause is more easily discovered.
- 859. They are visibility, audibility, olfactility, gustibility, and tactility.
- 860. Visibility is a quality manifested by color.
- 861. Color is a quality arising out of a certain distribution of transparent and opaque.
- 862. Audibility is by sound.
- 863. A sound is a quality which is a capacity of a body of giving forth upon a collision such and such a sound on a wave.
- 864. Olfactility is by odor.
- 865. Odor is a quality made by an intermixture of dry and well-tasting with hot.
- 866. Gustibility is by taste.
- 867. Taste is [a product of] the same intermixture as the previous.
- 868. Tactility is by the tactile qualities which are softness and hardness.
- 869. Porosity is the effect of a mixture by which it is made porous.
- 870. And pores are tiny apertures in a mixture by which it is pervious and penetrable.
- 871. Density is the effect of a paucity and small size of the pores.
- 872. Rarity arises from the large size and number of pores.
- 873. Now the species of elements or compounds, are either inanimate or animate.
- 874. The inanimate mixtures are without soul.
- 875. And are either meteorological or geological.
- 876. Meteorological is an inanimate object of imperfect mixture and therefore suddenly comes and as suddenly goes.
- 877. It has principles and species.
- 878. Its principles are fumes and vapors.
- 879. Fumes are arid and dry exhalations.

880. Vapor est exhalatio aquaea et humida.
881. Meteorum est igneum aerum vel aquaeum, dicuntur ex similitudine.
882. Ignea sunt in suprema ut stella cadens etc. vel in media ut fax fulgur fulmen, etc. vel in infirma aeris regione ut ignis fatua, etc.
883. Aerea est ventus vel terrae motus qui est ventus in visceribus terrae inclusus et exire contendens.
884. Aquaeae sunt superiora ut nubes, etc. vel inferiora ut ros, gelum, etc.
885. Fossile est inanimatum ex sulphure et argento vivo constitutum perfectioris mistionis.
886. Ejus sunt principia et species.
887. Principia sunt sulphur et argentum vivum.
888. Sulphur est principium callidius et siccus.
889. Argentum vivum est principium humidius et frigidius.
890. Fossile est lapis vel metallum vel minerale.
891. Lapis est fossile ex dominante sicco et arido, scil. sulphure.
892. Estque vulgaris vel praeciosus.
893. Metallum est fossile ex dominante humido et frigido vel argento vivo.
894. Ejus affectiones sunt liquefactio et dilatatio.
895. Estque purum, ut aurum, argentum, etc. vel impurum ut ferrum, stannum, etc.
896. Minerale est mediae naturae, ut sal, etc.
897. Ad huc inanimatum sequitur animatum. Animatum est mistum anima praeditum.
898. Ejus sunt membra et species.
899. Membra corpus et anima sunt.
900. Corpus est membrum apte organizatum operationes et functiones animae.
901. Anima est membrum quod est spiritus elementaris qui est principium illarum operationum.
902. Animatum est unia (vel pluribus) ⁵ anima praeditum.
903. Unica est planta (vel stella).

⁵ In parentheses, later crossed out by the author. Cf. Nos. 915-917. [The Editors.]

880. Vapors are water and moist exhalations.
881. Meteorological phenomena are fiery, or aerial, or aqueous, so-called because of their resemblance.
882. The fiery are in the highest [heaven], as a falling star; or in the middle regions, as a meteor, lightning, thunderbolt, etc.; or in the lowest region of the air as the will o' the wisp, etc.
883. The aerial are winds or earthquakes, which are wind in the bowels of the earth trying to escape.
884. The aqueous are superior, as clouds, etc.; or inferior as dew, frost, etc.
885. A geological [phenomenon] is an inanimate and more perfect mixture of sulphur and quicksilver.
886. It has principles and species.
887. Its principles are sulphur and quicksilver.
888. Sulphur is the hotter and drier principle.
889. Quicksilver is the moister and colder principle.
890. A geological [phenomenon] is either a rock or a metal or a mineral.
891. A rock is predominantly made of the dry and arid, *viz.*, sulphur.
892. And is either common or precious.
893. A metal is predominantly made of the moist and cold, *viz.*, quicksilver.
894. Its qualities are liquifaction and expansion.
895. And is pure, like gold, silver, etc.; or impure, like iron, tin, etc.
896. A mineral is of a middle nature as salt, etc.
897. So far inanimate; there follows animate. An animate mixture is one possessed of a soul.
898. It has members and species.
899. Its members are body and soul.
900. The body is the member so organized as to be suited to the operations and functions of the soul.
901. The soul is the member which is the elementary spirit, which is the principle of those operations.
902. An animated being is furnished with one (or several)⁵ souls.
903. Single [souled] are the plants (or stars).

⁵ In parentheses, later crossed out by the author. Cf. Nos. 915-917. [The Editors.]

904. Planta est animatum unica anima scil. vegetante praeditum.
905. Anima vegetativa est spiritus elementaris qui est principium operationum vegetantium.
906. Operationes ceu facultates istae sunt appetitus, attractrix, retentrix, concoctrix, nutrix, auctrix, expultrix, et procreatrix.
907. Appetitus est facultas qua planta alimentum appetit vel cibum ut fames vel potum ut sitis.
908. Attractrix qua alimentum appetitum attrahit.
909. Retentrix qua alimentum attractum retinet.
910. Concoctrix qua alimentum retentum concoquitur.
911. Nutrix qua alimentum concoctum unitur corpori.
912. Auctrix qua corpus augetur ex alimento concocto et unito.
913. Expultrix qua excrementa superflua ejiciuntur.
914. Procreatrix qua simile generat similem.
- (915. Stella est animatum unica scil. anima motiva praedictum.
916. Anima motiva est spiritus elementaris qui est principium motionis stellae.
917. Stella est fixa vel erratica ceu planeta.)
918. Haectenus unica sequitur pluribus animis praeditum ut animal. Animal ideo est animatum pluribus animis praeditum, scil, vegetativa, motiva, et sensitiva.
919. Ejus sunt membra et species.
920. Membra sunt corpus et anima.
921. Corporis partes sunt continentes vel contenta.
922. Continentes sunt homogeneae vel heterogeneae.
923. Homogeneae sunt spermaticae caro vel adeps.
924. Spermaticae, ossa, cartilago, ligamenta, membrana, nervi, venae, fibrae, cutis, et musculi.
925. Heterogeneae sunt externae vel internae.
926. Externae sunt caput, truncus et artus.
927. Caput continet cranium et facies.
928. Facies continet oculos, aures, nasum, genae, et os.
929. Os continet dentes, linguam, palatum, et gurgulionem.
930. Truncus est anterior vel posterior.
931. Anterior est superior ceu thorax cujus partes sunt osseae ceu costae et carnosa ceu mamma, et inferior ceu venter.

904. A plant is an animated being furnished with a single soul, *viz.*, the vegetative.
905. The vegetative soul is the elemental spirit which is the principle of the vegetative operations.
906. Its operations or faculties are appetite, attraction, retention, digestion, nutrition, growth, excretion, and procreation.
907. Appetite is the faculty by which the plant seeks nourishment; either food, like hunger, or drink, like thirst.
908. Attraction whereby it draws up the desired food.
909. Retention whereby it retains the food drawn to it.
910. Digestion by which the retained food is digested.
911. Nutrition by which the digested food is united to the body.
912. Growth, by which the body grows by the digested and assimilated food.
913. Excretion whereby the superfluous excrements are ejected.
914. Procreation whereby similars beget similars.
- (915. A star is animated by a single soul, *viz.*, the motive.
916. The motive soul is the elemental spirit which is the principle of the motion of the star.
917. A star is fixed or a wandering planet.)
918. So far one-souled beings; there follow beings furnished with several souls, as an animal. An animal is accordingly an animated being furnished with several souls, *viz.*, the vegetative, motive, and sensitive.
919. It has members and species.
920. Its members are body and soul.
921. The parts of its body are containers and contents.
922. Containers are homogeneous or heterogeneous.
923. The homogeneous are *spermaticee*, flesh and fat.
924. *Spermaticee* (are) bones, cartilage, ligaments, membranes, nerves, veins, fibres, skin, and muscles.
925. The heterogeneous are external or internal.
926. The external are head trunk and limbs.
927. The head contains brain and face.
928. The face contains eyes, ears, nose, cheeks, and mouth.
929. The mouth contains teeth, tongue, palate, and throat.
930. The trunk is anterior or posterior.
931. Anterior it is superior or the thorax, whose parts are bony or ribs, and fleshy or breast; and inferior or belly.

932. Posterior est dorsum ubi sunt scapulae, spina, et coxae.
933. Artus sunt manus vel pedes.
934. Manus comprehendit brachium et cubitum et palmam ubi digiti.
935. Pes comprehendit femur, crus, et plantam ceu pedem parvum.
936. Internae partes sunt in ventre supremo, medio vel infimo.
937. In ventre supremo ceu cranio sunt cerebrum, et cerebellum, organa sensus interni cujas pia mater et dura mater.
938. In ventre medio ceu stomacho sunt cor quod est principium et fons vitae et primum ut dicitur vivens et ultimum moriens et pulmones.
939. In ventre infimo sunt partes nutritioni vel generationi inservientes.
940. Nutritioni inserviunt tum primae tum secundae concoctionis partes.
941. Primae concoctioni inserviunt osseophagus, ventriculus et intestinae.
942. Secunde inserviunt jecur, fel, lien et renes.
943. Partes contentae sunt humor pars aerea et aquea ut sanguis vel spiritus animalis pars ignea et aerea.
944. Haectenus corpus. Anima sensitiva est spiritus elementaris qui est principium sensationis appetitus et motus.
945. Facultates ideo sunt illae tres.
946. Sensus est facultas animae sentientis qua animal sensit singularia objecta.
947. Ad sensationem requiruntur organum objectum et medium congruum.
948. Sensus est externus vel internus.
949. Sensus externus est quo animal sensit objecta ad extra.
950. Estque visus, auditus, olfactus, gustus, et tactus.
951. Visus est sensus externus quo animal objectae visibilia per medium diaphanum oculis percipit.
952. Auditus est sensus externus quo animal objecta audibilia per medium personabile quodumque auribus percipit.

932. Posterior is the back where are the shoulder blades, spine, and hips.
933. The limbs are arms and legs.
934. The arm comprises the fore-arm and elbow, and palm, where are the fingers.
935. The leg comprises the femur, shank, and sole or small foot.
936. The internal parts are in the upper, middle, or lower cavity.
937. In the upper cavity or cranium are cerebrum and cerebellum, the organs of sense inside of which are *pia mater* and *dura mater*.
938. In the middle cavity or gullet are heart, which is the principle and fount of life and the first [as is said] to live and last to die, and the lungs.
939. In the lower cavity are the parts serving nutrition or reproduction.
940. Of those serving nutrition there are primary and secondary organs of digestion.
941. The primary organs of digestion are the oesophagus, stomach, and intestines.
942. The secondary are the liver, gall-bladder, spleen and kidneys.
943. The parts contained are humors, like blood, which are the aerial and watery parts, and animal spirits which are the fiery and aerial parts.
944. So far the body. The sensitive soul is the elemental spirit which is the principle of sensation, appetite and motion.
945. Its faculties are, therefore, these three.
946. Sense is the faculty of the sensitive soul by which the animal senses single objects.
947. Sensation requires an organ an object and a congruous medium.
948. Senses are external or internal.
949. An external sense is one by which the animal senses objects externally.
950. And is vision, hearing, smelling, taste or touch.
951. Vision is the external sense by which an animal perceives with the eyes visible objects, through a diaphanous medium.
952. Hearing is the external sense by which an animal perceives with the ears audible objects through some medium capable of resounding.

953. Olfactus est sensus externus quo animal objecta olfactilia per medium congruum naso percipit.
954. Gustus est sensus externus quo animal objecta gustilia per medium salivam et carnem musculorum lingua et palato percipit.
955. Tactus est sensus externus quo animal objecta tactilia per medium carnem quavis corporis parte carnosa et nervosa percipit.
956. Affectiones eorum sunt vigilia et somnus.
957. Vigilia est sensuum externorum solictio.
958. Somnus est eorum ligatio.
959. Sensus internus est quo animal objecta ad extra percepta ad intra percipit et dejudicat.
960. Ejus actus sunt phantasia cogitatio et memoria.
961. Phantasia est actus ceu operatio qua percipiuntur objecta et apprehenduntur.
962. Cogitatio ceu judicium est qua dijudicantur.
963. Memoria qua recognoscuntur.
964. Huius affectio est somnium.
965. Somnium est apparitio objecti sensui interno in somno.
966. Appetitus animalis est facultas qua bonum appetit et malum aversitur.
967. Motus animalis est facultas qua ejus spiritus animales agitantur.
968. Estque affectus, motus localis, respiratio, et pulsatio.
969. Affectus est motus animalis ex appetitu boni et versatione mali ortus.
970. Estque approbatione vel improbatione.
971. Affectus approbationis est qui constitutum voluptate; hic motus spiritum est a corde.
972. Voluptas est ejus qualitas ex perceptione objecti grati.
973. Estque hic affectus laetitia, spes vel amor.
974. Laetitia est affectus approbationis quo animal gaudet propter objectum gratum praesens.
975. Spes est quo animal cum voluptate expectat aliquod gratum futurum.

953. Smell is the external sense by which an animal perceives with the nose objects with an odor through a congruous medium.

954. Taste is the external sense by which an animal perceives objects with a flavor through the medium of saliva and the flesh of muscles by means of the tongue and palate.

955. Touch is the external sense by which an animal perceives tactile objects through the medium of flesh and by any fleshy and neural part of the body.

956. Their modes are being awake and being asleep.

957. Being awake is the excitation of the external senses.

958. Sleep is their bondage.

959. The internal sense is one by which an animal perceives internally the objects perceived externally and judges them.

960. Its acts are imagination, thought, and memory.

961. Imagination is the act or operation by which objects are perceived and apprehended.

962. Thought or judgment is that by which things are judged.

963. Memory is that by which things are recognized [recalled].

964. Its mode is dreaming.

965. A dream is an appearance of an object to the internal sense in sleep.

966. An animal's appetite is the faculty by which it seeks good and avoids evil.

967. The motive of an animal is the faculty by which its animal spirits are excited.

968. And is an emotion, locomotion, respiration or the beating of the pulse.

969. An emotion is an animal movement arising out of the pursuit of good and avoidance of evil.

970. And is either approval or disapproval.

971. The emotion of approval is whatever agrees with pleasure. This motion of the spirits comes from the heart.

972. Pleasure is its quality arising from the perception of an agreeable object.

973. And this emotion is either joy, hope or love.

974. Joy is the emotion of approval by which an animal rejoices on account of the presence of an agreeable object.

975. Hope is that by which an animal expects with pleasure some future agreeable object.

976. Amor est quo animal propter objectum gratum tum praesens tum absens gaudet eique uniri cupit.
977. Affectus improbationis consistit cum dolore. Hic motus est ad cor.
978. Dolor est ejus qualitas ex objecto ingrato.
979. Estque simplex aut mixtus.
980. Estque tristitia, misericordia, vel metus.
981. Tristitia est affectus improbationis simplex quo animal propter praesens ingratum sibi.
982. Misericordia est quo animal dolet propter ingratum praesens alteri.
983. Metus est quo animal dolet propter futurum ingratum quod expectat.
984. Mixtus est ira vel zelus.
985. Ira est quo animal ulciscere cupit ex ardua tristitia ut deprimetur malum.
986. Huic cognatum est odium quod est ira inveterata.
987. Zelus est quo animal irascitur cum illo quod laedit illud quod amat.
988. Motus localis est quo animal movet de loco in locum.
989. Respiratio est quo animal attrahit et reddit respirabile quod spiritus vivificet.
990. Pulsatio est quo modo contrahuntur modo dilantur spiritus animales in corde et arteriis.
991. Nunc species, animal est bestia vel homo.
992. Bestia est animal tantum sentiens ceu irrationale cujus anima principalis est sensitiva.
993. Estque imperfecta ut insectum vel perfecta.
994. Utraeque sunt quoque aerae, aequae vel terrestres.
995. Homo est animal rationale vel cujus anima principalis est anima rationalis.
996. Affectiones ejus sunt loquella ceu ejus notificatio mentis sono articulato, vel risibilitas, vel nota gaudii vel fletus nota doloris.
997. Utraeque animal et homo et bestia est mas vel foemina natura robustior vel debilior.
998. Hisce omnibus naturis ordinate in rotundum aggregatis est *mundus*.

976. Love is that by which an animal rejoices over an agreeable object whether present or absent, and desires to be united with it.
977. The emotion of disapproval is associated with pain. This motion goes to the heart.
978. Pain is its quality derived from a displeasing object.
979. And is simple or mixed.
980. And is sadness, pity or fear.
981. Sadness is the simple emotion of disapproval by which an animal is grieved, because of the presence of an object displeasing to it.
982. Pity is that by which an animal grieves on account of the presence to another of something displeasing.
983. Fear is that by which an animal grieves on account of some future displeasure which it expects.
984. The mixed are either anger or jealousy.
985. Anger is that by which an animal in severe distress desires to punish in order that the evil may be suppressed.
986. Related to this is hatred which is inveterate anger.
987. Jealousy is that by which an animal is angry with that which injures what it loves.
988. Locomotion is when an animal moves from place to place.
989. Respiration is when an animal inhales and exhales that which the spirit makes alive.
990. The beating of the pulse is the alternate contracting and expanding of the animal spirits in the heart and arteries.
991. Now the species; animals are brutes or men.
992. A brute is an animal only sentient or irrational, whose principal soul is the sensitive.
993. And is imperfect (as the insect) or perfect.
994. Both are also aerial, aquatic, or terrestrial.
995. Man is a rational animal, or one whose principal soul is the rational soul.
996. His properties are speech, or his system of mental symbols by articulate sound; his ability to laugh, or his sign of joy; weeping, or his sign of grief.
997. All animals both man and beast are male or female, by nature stronger or weaker.
998. All these natural beings are orderly assembled in a round whole which is *the world*.

999. Mundus est ordinata compages omnium naturalium ab uno principio pendentium et in unum finem tendentium.

Finis

1000. Haecetenus physica sequitur *Theologia* circa bonitatem rerum.
1001. Bonitas est qua euprattomenon dicatur bonum.
1002. Bonum est ens a primo in gloriam Dei factum.
1003. Quia vero aliqua actio regulis artis semper dirigitur et vita est actionum nobilissima et in illa illucet tunc effulget bonitas creaturae sit ergo hisce regulis vita directo. Hinc, ideo
1004. Theologia est ars ectypa seu doctrina Deo vivendo. Rom. 6. 10, 11 Heb. 5. 12.
1005. Ejus objectum est eupraxia vitae seu Deo vivere.
1006. Eupraxia vitae est motus regularis viventis in vivendo, i.e. spiritualiter seu Deo vivere.
1007. Deo vivere est secundum voluntatem Dei vivere in gloriam Dei Deo intus agente. 1 Pet. 4. 2.
1008. Explicatur tantum regulis vivendi objecto scilicet. positat in illis declarandis S. S. Scripturo revelatis exemplis et praeceptis.
1009. Eupraxia haec scilicet. Deo vivere dividitur in membra hinc est Fides vel Observantia.
1010. Fides est acquiescentia cordis in Deo tanquam in authore omnis vitae ac salutis aeternae ut per illum ab omni malo liberemur et omne bonum consequamur Heb. 10. 3, 8. Rom. 4. 3. Heb. 4. 3. Jno. 3. 33, 36.
1011. Explicatur ab objecto quod est Deus. Idecirco de cognoscendo Dei agitur. 1 Tim. 6. 16.
1012. Deus prout seipsum nobis revelavit cognoscitur quasi ex dorso. Exod. 33. 23.
1013. Estque in ejus sufficientia et efficientia, columnae fidei.
1014. Sufficientia Dei est qua ipse in se se sibi et nobis satis habet. Gen. 17. 1.
1015. Sufficientia Dei est in ejus vel essentia vel subsistentia.

999. The world is the ordered structure of all natural being dependent on one principle and tending to one end.

End

1000. So far physics. There follows *theology* concerning the goodness in things.

1001. Goodness is that whose *euprattomenon* is called good.

1002. Good is a being made from the beginning to the glory of God.

1003. But since any action is always governed by the rules of art, and life is the noblest of actions and in it the goodness of the creature beams and shines forth, therefore life may be directed by these rules. And accordingly,

1004. Theology is the ectypal art or doctrine of living for God. Rom. 6. 10, 11. Heb. 5. 12.

1005. Its object is the *eupraxia* of life or living for God.

1006. The *eupraxia* of life is the orderly procedure of life in living, *i.e.*, spiritually or living for God.

1007. Living for God is following the will of God, living to the glory of God, God being the internal agent. 1. Pet. 4. 2.

1008. It is expounded only on the basis of its object, the rules of living; in other words, it rests on their being manifested by the examples and precepts revealed in Holy Scriptures.

1009. Its *eupraxia*, *viz.*, living for God, is divided in parts thus: faith and observance.

1010. Faith is the acquiescence of the heart in God as the author of all life and of eternal salvation, that by Him we are freed from all evil and pursue all that is good. Heb. 10. 3, 8. Rom. 4. 3. John 3. 33, 36.

1011. It is expounded by its object, which is God. Consequently we treat of knowing God. 1 Tim. 6. 16.

1012. God, according as he reveals himself to us, is known as if from behind. Exod. 33. 23.

1013. And in Him there is sufficiency and efficacy, the pillars of faith.

1014. The sufficiency of God is that He is self-sufficient both for Himself and for us. Gen. 17. 1.

1015. The sufficiency of God is in His essence and in His subsistence.

1016. *Essentia Dei est qua est Ens absolute primum.* 44 Is. 6. Rev. 1. 8.
1017. *Indicatur haec essentia nominibus [Hebrew words] — Exod. 6. 3. etc.*
1018. *Quia vero haec essentia non potest a nobis uno actu apprehendi, ideo explicatur quasi multiplex per multa, scilicet, attributa pro more nostro concipiendi.*
1019. *Attributa Dei sunt unica illa essentia varie a nobis apprehensa prout varie nobis repraesentatur.*
1020. *Suntque in Deo unus simplicissimus ac purissimus actus.*
1021. *Explicant illa quid sit Deus et quis sit.*
1022. *Quid sit Deus nemo cognovit. sed ut semet ipsum nobis revelatur talis detur definitio:*
1023. *Deus est Spiritus se ipso vivens.* Jno. 4. 24, 25, 26, analogue.
1024. *Quis sit explicant proprietates suae essentialiaes.*
1025. *Illae explicant quantus et qualis sit.*
1026. *Sub notione quantitatis dicitur Unus infinitus ac aeternus.*
1027. *Unus est Deus unitate illa perfectissima quae creaturis individuatim solet appellari.*
1028. *Infinitus est Deus quatenus omnis essentialis limitationis expers est.* Ps. 139 & 1 Reg. 8. 27.
1029. *Deus est aeternus quatenus principii et finis expers est.* 102 Ps. 25, 26. Isai. 44. 6; I Tim. 1. 17.
1030. *Qualis est Deus explicant proprietates illae quibus dicitur operari.*
1031. *Suntque facultates vel virtutes divinae.*
1032. *Facultates illae sunt intellectus et voluntas.*
1033. *Virtus est perfecti intellectus et voluntatis qualis est in Deo sapientia, sanctitas.*
1034. *Haec essentia, sequitur subsistentia Dei. Subsistentia Dei est una illa essentia prout est cum suis proprietatibus hypostatice seu personalibus.*
1035. *Subsistentiae seu personae Divinae sunt vel spirantes vel spiratae.*
1036. *Spirantes sunt Pater et Filius.*
1037. *Patris relativa proprietates est gignere.* Ps. 2. 7.

1016. The essence of God is that He is absolute and primary being. 44 Is. 6. Rev. 1. 8.
1017. This essence is indicated by His names — [Hebrew words] Exod. 6. 3, etc.
1018. But since this essence can not be apprehended by us in one act, therefore let it be expounded by many, as if multiplex, *viz.* by His attributes, for the sake of our comprehension.
1019. The attributes of God are this single essence variously apprehended by us, according as He is variously represented to us.
1020. They are in God one act of utmost simplicity and purity.
1021. They explain what God is and who He is.
1022. What God is no none knows, but as He reveals Himself to us, some sort of definition may be given as:
1023. God is a spirit living to Himself. Jno. 4. 24, 25, 26, analogically speaking.
1024. Who He is is explained by His essential properties.
1025. These explain how much and of what nature He is.
1026. Under the notion of quantity He is called one, infinite and eternal.
1027. God is one with that most perfect unity which is usually attributed to indivisible creatures.
1028. God is infinite in that the whole of His essence is devoid of limitations. Ps. 139 and I Kings 8. 27.
1028. God is eternal in that He is devoid of beginning and end. 102 Ps. 25, 26; Isai. 44. 6; I Tim. 1. 17.
1030. Of what nature God is, those properties explain by which He is said to operate.
1031. And they are either the divine faculties or the divine virtues.
1032. These faculties are intellect and will.
1033. Virtue is the perfection of intellect and will which in God is wisdom and holiness.
1034. So far the essence; now follows the subsistence of God. God's subsistence is identical with His essence in respect of His substantive and personal properties.
1035. The divine substances or persons are either the manifesting or the manifested.
1036. The manifesting are Father and Son.
1037. The relative property of the Father is to beget. Ps. 2. 7.

1038. Filii vero est gigni. Heb. 1. 3.
1039. Spirata est Spiritus Sanctus. 1 Jno. 5. 7.
1040. Ejus relativa proprietas est spirari. Jno. 15. 26. Rom. 8. 9. Gal. 4. 6. Omnes unus Deus.
1041. Potest hoc modo adumbrari aliqua ex parte.
1042. Deus concipit imaginem sui ut Pater hinc Deus intelligens.
1043. Dei imago a se concipitur hinc Filius, hinc Deus intellectus.
1044. Deus post se spiratur hinc Spiritus nctus, hinc Deus dilectus.
1045. Filius producit quasi per actum intelligendi, scil. actu intellectus.
1046. Spiritus producit quasi per actum diligendi, scil. actu voluntatis.
1047. Sic de sufficientia nunc Dei efficientia. Efficientia Dei est qua omnia in omnibus operatur. Rom. 11. 36. Eph. 1. 11.
1048. In efficiente Dei elucet ratio essentiae divinae et ratio subsistentiae.
1049. Ratio illa efficiens quae ad essentiam Dei pertinet est omnipotentia.
1050. Omnipotentia Dei est qua potens est efficiens omnia quae vult aut velle potest. 2 Chron. 20. 6. Luke 1. 37.
1051. Hinc Deus appellatur Isai. 9. 6. Jer. 32. 18 [Hebrew] and Gen. 17. 1 [Hebrew] 2 Cor. 6. 18. et 1 Tim. 6. 5.
1052. Ratio subsistentiae est in personarum omnium cooperatione et modo distincto.
1053. Cooperatio est qua omnes persone rem eandem operantur inseparabiliter. ut Jno. 5. 17, 19. & 16. 13, 14.
1054. Modus distinctus est quo quaelibet operatur secundum distinctum rationem subsistentiae hinc quoad ordinem.
1055. Patris operandi modus est a se per Filium et Spiritum S. hinc origo rerum et sic creatio illi tribuitur.
1056. Filii operandi modus est a Patre et per Spiritum S. hinc dispensatio et sic redemptio illi tribuitur.

1038. And of the Son to be begotten. Heb. 1. 3.
1039. The manifested is the Holy Spirit. 1 John 5. 7.
1040. Its relative property is to be manifested (breathed). John 15. 26. Rom. 8. 9. Gal. 4. 6. All one God.
1041. He can thus be in a manner and in part represented.
1042. God conceives His own image as Father, hence the divine mind.
1043. God's image is conceived by Himself, hence the Son, hence the divine thought.
1044. God manifested after Himself, hence the Holy Spirit, hence the divine choice.
1045. The Son is produced as if by the act of thinking. *viz.* by an act of intellect.
1046. The Spirit is produced as if by the action of choosing, *viz.*, by an act of will.
1047. So much about the sufficiency; now about the efficacy of God. God's efficacy is that by which He does all things in all things. Rom. 11. 36. Eph. 1 11.
1048. In God's efficacy there is manifest the ground of the divine essence and subsistence.
1049. That efficient ground which pertains to God's essence is omnipotence.
1050. God's omnipotence is that by which He can do and does all things He wills or can will. 2 Chron. 20. 6. Luke 1. 37.
1051. Hence God is called Isai. 9. 6. Jer. 32. 18. [Hebrew] and Gen. 17. 1 [Hebrew] and 2 Cor. 6. 18 and 1 Tim. 6. 5.
1052. The ground of subsistence is in the coöperation of all persons and in the distinct mode.
1053. Coöperation is the [mode] where all persons inseparably accomplish one and the same deed; as Jno. 5. 17, 19. And 16. 13, 14.
1054. The distinct mode is where any one [of the three persons] works according to a distinct ground of subsistence and hence according to a definite plan.
1055. The *modus operandi* of the Father is from Himself through Son and H. Spirit, hence the origin of things and thus creation is attributed to Him.
1056. The *modus operandi* of the Son is from the Father and through the H. Spirit, hence the dispensation, and thus redemption is attributed to Him.

1057. Spiritus S. Operandi motus a Patre et Filio et per se se, hinc consummatio et sic applicatio redemptionis illi tribuitur.
1058. Efficientiae Dei praeficit et in illa elucet decretum Dei.
1059. Decretum Dei est definita ejus sententia de rebus omnibus secundum consilium et per omnipotentiam suam efficiendis. Eph. 1. 11.
1060. Consilium Dei est quasi deliberatio de re qualibet jam intellectui approbata et voluntati optime efficienda; Huc Ars Dei.
1061. Efficientia Dei est creatio vel providentia.
1062. Creatio est efficientia Dei qua mundum fecit ab origine ex nihillo sex diebus valde bonum. Gen. 1.
1063. Creaturae rationales creatae fuerunt ad imagine Dei.
1064. Imago Dei est conformitas creaturae rationalis pro sua modulo ad summam Dei perfectionem.
1065. Consistit in sapientia, sanetitate et justitia. Eph. 2, 24. Collos. 3. 10.
1066. Providentia Dei est efficientia qua creaturis jam existentibus prospicit in omnibus secundum consilium suae voluntatis. Ps. 145. 15, 16, 17, etc.
1067. Estque conservatio vel gubernatio.
1068. Conservatio est providentia qua Deus persistere facit res omnes et universales et singulares tam quoad essentiam et existentiam quam quoad vires. Ps. 104. 19.
1069. Gubernatio est qua Deus omnes creaturos ad proprios fines dirigit ac perducit. Ps. 29.
1070. Gubernatio est communis vel specialis.
1071. Communis est qua Deus omnes creaturas simili modo gubernat.
1072. Specialis est qua Deus creaturas rationales morali modo gubernat. Mic. 6. 8.
1073. Huic existit foedus inter Deum et creaturam rationalis scil. foedum operum.
1074. Foedus hoc est transactio Dei cum creatura qua Deus praecipit promittit, minatur et implet et creatura Deo stipulantur suum obstringit obsequium. Deut. 26. 16. etc.
1075. Conditio fuit fac et vives.

1057. The Holy Spirit's *modus operandi* is from Father and Son and through Himself, hence the consummation and thus the direction of redemption is attributed to Him.

1058. Antecedent to the efficacy of God and shining forth in it is God's decree.

1059. God's decree is His definite pronouncement about all things according to His plan and through His efficacious omnipotence. Eph. 1. 11.

1060. God's plan is, as it were, a deliberation about anything already approved by His intellect and to be executed in entirety by His will. Thus, the art of God.

1061. God's efficacy is creation and providence.

1062. Creation is God's efficacy whereby He made the world very good from the beginning out of nothing in six days. Gen. 1.

1063. Rational creatures were created in the image of God.

1064. The image of God is the conformity of a rational creature in his small measure to the highest perfection of God.

1065. It consists in wisdom, holiness and justice. Eph. 2. 24. Collos. 3. 10.

1066. God's providence is the efficacy by which He looks ahead from the creatures already existing to all according to the plan of His will. Ps. 145. 15, 16, 17, etc.

1067. And is preservation or government.

1068. Preservation is the providence by which God causes all things both universal and particular to stand fast as well in respect of their essence and existence as of powers. Ps. 104. 19.

1069. Government is whereby God directs and conducts all creatures to their several ends. Ps. 29.

1070. Government is common or special.

1071. The common is whereby God governs all creatures in a similar manner.

1072. The special is whereby God governs rational creatures in a moral manner. Mic. 6. 8.

1073. For this there exists a covenant between God and rational creatures, *viz.*, the covenant of works.

1074. This covenant is a transaction between God and creature whereby God directs, promises, warns and fulfils, and the creature pledges himself to God and promises his obedience. Deut. 26. 16. etc

1075. The condition is: Do this and live.

1076. Estque haec gubernatio angelorum vel hominum.
1077. Utriusque in praescriptione legis scil. decalogi et ordinatione eventus inde sequentiam.
1078. In ordinatione eventus quoad angelos fuit quorundum ut bonorum statio et alienum ut malorum seu diabolorum lapsus.
1079. In ordinatione eventus quoad hominem sunt ejus apostasia et anastasia. Rom. 5. 19.
1080. Apostasis est lapsus hominis ab obedientia Deo debita vel transgressio legis a deo praescriptae.
1081. In huc duo fuerunt scil. transgressionis perpetratio et ejusdem propagatio.
1082. Perpetratio consummata fuit in esu fructus arborii prohibiti scil. scientiae boni et mali.
1083. Huic fuerunt causae et effectus.
1084. Causae fuerunt Diabolus vir et mulier.
1085. Orta inde fuerunt reatus, turpitudine et poena.
1086. Reatus est obligatio peccatoris ad poenam justum sustinendam propter culpam. Rom. 3. 10, 19.
1087. Turpitudine est polutio illa spiritualis qua peccator destituitur nitore et splendore et fit vilis. Mat. 15. 11. Apoc. 22, 11.
1088. Poena est malum peccatori propter peccatum inflictum.
1089. Estque hoc malum mors. Gen. 2. 17. Rom. 5. 12.
1090. Mors est misera privatio vitae.
1091. Mortis duo sunt gradus incohatio et consummatio, duo membra, poena damni et poena sensus, et duo species spiritualis et corporalis.
1092. Spiritualis mortis incohatio in genere damni est imaginis Dei deformatio.
1093. Spiritualis mortis incohatio in genere sensus est servitus spiritualis.
1094. Servitus spiritualis est subjectus ad potestatem tenebrarum sive hostium spiritualiter lethalium. C. 1. 13. 2 Pet. 2. 19.
1095. Consequens est multiplicatio peccati.
1096. Estque originale vel actuale.
1097. Peccatum originale est totius naturae hominis habitualis exorbitatio et deviatio a lege Dei. Gen. 6. 5.

1076. And this government is either of angels or of men.
1077. For both are under the prescription of the law, *i.e.*, the decalogue and under the order of events following upon it.
1078. In the order of events with respect to the angels was the standing of some, the good, and the fall of others, the bad or devils.
1079. In the order of events with respect to man are his apostacy and anastacy. Rob. 5. 19.
1080. Apostacy is the fall of man from the obedience owed to God, or the transgression of the law by God prescribed.
1081. In this two things were involved, *viz.*, the perpetration of transgression and its propagation.
1082. The perpetration was accomplished by the eating of the fruit of the forbidden tree, *viz.*, of the knowledge of good and evil.
1083. This had causes and effects.
1084. The causes were devil, man and woman.
1085. Thence sprang guilt, depravity, and punishment.
1086. Guilt is the obligation of the sinner to sustain the just punishment on account of his fault. Rom. 3. 10, 19.
1087. Depravity is that spiritual pollution by which the sinner is shorn of his brightness and splendor and made vile. Mat. 15. 11. Rev. 22. 11.
1088. Punishment is the evil inflicted on a sinner on account of his sin.
1089. And this evil is death. Gen. 2. 17. Rom. 5, 12.
1090. Death is the wretched privation of life.
1091. Death has two stages, inception and consummation; two parts, the pains of injury and the pains of the senses; and two species, spiritual and corporal.
1092. The inception of spiritual death as a kind of injury is the disfiguration of the image of God.
1093. The inception of spiritual death as a kind of [infliction on] the senses is spiritual bondage.
1094. Spiritual bondage is subjection to the power of darkness or the deadly enemies of the spirit. Col. 1. 13. 2 Pet. 2. 19.
1095. The consequence is a multiplication of sin.
1096. And it is original or actual.
1097. Original sin is the habitual transgression and deviation of the whole human nature from the law of God. Gen. 6. 5.

1098. Actuale est omnium actuum humanorum exorbitatio ac deviatio a lege Dei. Jno. 3. 4.
1099. Corporalis mortis incohatio in genere damni est interna vel externa.
1100. Interna est emissio bonorum corporis internorum sanitatis ac vivacitatis. 1 Cor. 11. 30.
1101. Externa exteriorum ut domini, i. e. creaturas, etc.
1102. In genere sensus est etiam interna vel externa.
1103. Interna est in fatigatione. Gen. 3. 9. dolore et morbis. Deut. 28. 35.
1104. Externa est in omnibus illis calamitatibus quibus hominis vita est extrinsecus obnoxia. Deut. 28, 25, 48, etc. His quaedam moderatio fuit.
1105. Consummatio mortis est summus gradus poenae constitutae et in aeternum duraturae.
1106. Propagatio peccati est qua omnes posterii Adami ab eo descendentes naturali modi fiunt ejusdem cum eo conditionis. Job 14. 14. Ps. 51. 7. Rom. 5. 14.
1107. Haectenus apostasio, sequitur anastasis. Anastasis ceu restitutio hominis est elevatio ejus ex statu peccati et mortis instatum gratiae et vitae.
1108. Estque redemptio vel redemptionis applicatio.
1109. Redemptio est vindicatio hominis in libertatem a servitute spirituali per justii praecis exhibitionem. Pet. 1, 18, 19. 1 Cor. 6, 20, & 7, 23.
1110. Quod cum homo requebat solvere necessaria fuit opera mediatoris.
1111. Mediator iste unicus est Jesus Christus. Actoi 4, 12. Mat. 1. 23.
1112. Cujus sunt aptitudo et partes redemptionis.
1113. Aptitudo fuit in personae et officium.
1114. In persona Christi fuerunt naturae distinctio et unio personalis.
1115. Naturae distinctio fuit qua fuit secunda persona deitatis et humana natura nostrae per omnia similes excepto peccato et subsistendi modo. Mat. 1. 23. Jno. 1. 14.

1098. Actual is the transgression and deviation of every human act from the law of God. John 3. 4.
1099. The inception of corporal death as a kind of injury is internal or external.
1100. Internal, it is the releasing of the bodily internal goods of health and vivacity. 1 Cor. 11. 30.
1101. External, of external [goods] as power, *i.e.*, [over] creatures, etc.
1102. As a kind of sensual [pain] is also internal or external.
1103. Internal, it consists in fatigue (Gen. 3. 9.), and in pain and disease. Deut. 28, 35.
1104. External, it consists in all those calamities by which human life is rendered obnoxious extrinsically. Deut. 28, 25, 48, etc. In these there has been a certain moderation.
1105. The consummation of death is the last stage of the established punishment and is to endure to eternity.
1106. The propagation of sin is in that all Adam's posterity descend from him in the natural way were placed in the same condition with him. Job 14. 14. Ps. 51, 7. Rom. 5. 14.
1107. So far the apostacy. There follows the anastacy. The anastacy or restitution of man is his elevation from the state of sin and death to the state of grace and life.
1108. And is either redemption or the application of redemption.
1109. Redemption is the vindication of man into liberty from spiritual bondage by the offering of a just price. Pet. 1. 18, 19. 1 Cor. 6. 20, and 7. 23.
1110. Since man needed to be freed, the work of a mediator was necessary.
1111. This sole mediator is Jesus Christ. Acts 4, 12. Mat. 1, 23.
1112. This redemption has aptitude and parts.
1113. The aptitude rests in His person and office.
1114. In Christ's person were a distinction of natures and a unity of person.
1115. The distinction of natures rested in the fact that He was the second person of the deity, and a human nature like ours in all things except in sin and mode of subsistence. Mat. 1. 23. Jno. 1. 14.

1116. Unio personalis est qua secunda persona deitatis humanam naturam assumpsit ut inseparabiliter subsisteret in eadem persona. Jno. 1.
1117. Officium Christo est omne illud quod suscipet ad salutem hominibus acquirendam. 1 Tim. 1. 15.
1118. In eo duo sunt Vocatio et Functio.
1119. Vocatio est actio Dei Patris qua singulari quodam pacto inito filium huic muneri destinavit. Pactum hoc exprimitur Isai. 53.
1120. Functio est triplex, scil. Prophetiae, Sacerdotis, et Regis.
1121. Prophetia Christi est qua totam voluntatem Dei salutiferam perfecte revelavit. Mal 3. 1.
1122. Sacerdotium Christi est qua peccata hominum expiavit et Dei favorem ipsius consiliavit. Col 1. 20, 22. Rom 5. 10.
1123. Regnum Christi est qua invento cum autoritate ac potentia dispensat ac administrat quae spectant ad hominis salutem. R. 2. 6. Dan. 2. 44. Luk. 1. 33.
1124. Partes redemptionis sunt Christi humiliatio et ejus exaltatio.
1125. Humiliatio Christi est qua subditus est justitiae Dei ad omnia illa perficienda quae requirebantur ad hominis redemptionem. Phil. 2. 8.
1126. Estque vita vel mors in obedientia sua activa et passiva.
1127. Vita fuit varia in conceptione nativitate et postquam natus est.
1128. Mors Christi est qua subiit horribile extremas et maximas pro hominum peccatis poenas. Jno. 10. 11. Gal. 3. 13.
1129. Exaltatio Christi est qua gloriose triumphavit de suis et nostris inimicis. Luk. 24, 26. Eph. 4, 8. Coll. 2. 15.
1130. Exaltationis tres fuerunt gradus totidem gradibus extremae humiliationis oppositis.
1131. Scil. Ressurrectio a mortuis opposita morti, ascensus in caelo opposita descensui in sepulchrum, sessio ad dextram Dei opposita permansioni in sepulchro et statu mortis.

1116. The unity of person rests on the fact that the second person of the deity assumed human nature so that it subsisted inseparably in the same person. John 1.
1117. The office of Christ is all that He endured in order that the salvation of man might be attained. 1 Tim. 1. 15.
1118. In it are two [elements] — vocation, and function.
1119. His vocation is the act of God by which the Father entered upon a singular covenant, as it were, and destined His son for this task. This covenant is expressed in Isai. 53.
1120. His function is three-fold, *viz.*, that of prophet, of priest, and of king.
1121. The prophecy of Christ consists in that He perfectly and entirely revealed the saving will of God. Mal. 3. 1.
1122. The priesthood of Christ consists in that He expiated the sins of man and conciliated the favor of God Himself. Col. 1. 20, 22. Rom. 5. 10.
1123. The Kingdom of Christ consists in His bringing in His kingdom and administering with authority and power the concerns of the salvation of man. Rom. 2. 6. Dan. 2. 44. Luke 1. 33.
1124. The parts of the redemption are Christ's humiliation and His exaltation.
1125. The humiliation of Christ consists in His being subjected to God's justice for the accomplishment of all those things which were required for the redemption of man. Phil. 2. 8.
1126. And consists of His life and death, in His active and passive obedience.
1127. His life consisted of the various events in His conception, nativity, and after His birth.
1128. The death of Christ is His undergoing in horrible manner the extreme and maximum penalty for human sins. John 10. 11. Gal. 3. 13.
1129. The exaltation of Christ is His glorious triumph over His and our enemies. Luke 24. 26. Eph. 4. 8. Coll. 2. 15.
1130. In His exaltation there were three stages, corresponding to the opposite stages of His extreme humiliation.
1131. *Viz.*, His resurrection from the dead, opposed to His death; His ascent into heaven, opposed to His descent into the tomb; sitting on the right hand of God, opposed to His remaining in the tomb and state of death.

1132. Haecten^{us} redemptio. Sequitur ejus applicatio qua omnia quae Christus ut Mediator fecit facitque actu efficaciae certis quibusdam hominibus redduntur. Jno. 16. 14. Tit. 3. 5, 6, 7. Jno. 10. 16. Rom. 10. 14, 17. Eph. 5. 25.
1133. Hujus applicationis ratio qua maxima per Spiritum Sanctum cum formitate praestat illud quod foedere prius contracto ac violato continebatur dicitur Foedus Novum. Heb. 8. 8, 10. Foedus Gratiae Rom 4. 16. etc. Crede et vives.
1134. In applicatione elucet praedestinatio.
1135. Praedestinatio est decretum Dei de speciali gloriae suae manifestatione in hominum statu aeterno. Rom. 9. 22, 23. 1 Thes. 5. 9.
1136. Estque electio vel reprobatio.
1137. Electio est praedestinatio certorum quorumdam hominum ut in iis manifestetur gratiae Dei gloria. Eph. 1. 4, 5, 6; 2 Thes. 2. 13. Rom. 9. 13.
1138. Reprobatio est praedestinatio certorum quorumdam hominum ut in iis manifestetur justitiae Dei gloria. Rom. 9. 22. 2 Thes. 2. 9. Jude 4; Phil. 3. 9.
1139. Applicationis partes sunt unio et communio.
1140. Unio est spiritualis illa relatio hominum ad Christum qua jus acquirunt ad omnes illas benedictiones quae in ipso praeparantur. 1 Jno. 5. 12; et 3. 24.
1141. Efficitur per vocationem Rom. 8, 30.
1142. Vocatio est aggregatio hominum ad Christum ut amantur illo. 1 Petr. 2. 4, 5; Eph. 4. 12.
1143. Vocationis sunt antecedens et partes.
1144. Antecedens est praeparatio.
1145. Praeparatio consistit in applicatione legis ad peccatum delegendum. Rom. 7. 7.
1146. Hujus applicationis legis effecta sunt contritio et humiliatio quibus anima abscinditur ab oleastro et praeparatur ad insitionem in illum quae bona est natura, scil. in Christum. Rom. 11. 23, 24.
1147. Partes sunt Christi oblatio et receptio.
1148. Oblatio Christi est ejus objectiva propositio ut medii sufficientis ac absolute necessarii ad salutem. 1 Cor. 1. 23, 24. Heb. 7. 25. Act. 4. 12. etc.

1132. So far the redemption. There follows its application by which all those things which Christ as mediator did and still does, by the action of His efficacy, are granted to certain men. Jno. 16. 14. Tit. 3. 5, 6, 7. John 10. 16. Rom. 10. 14, 17. Eph. 5. 25.

1133. The ground of this application, which is the highest through the Holy Spirit, since by its formation it takes precedence over what was contained in the covenant formerly contracted and violated, is called the New Covenant. Heb. 8. 8, 10. The Covenant of Grace. Rom. 4. 16, etc. Believe and you shall live.

1134. In the application there is manifested predestination.

1135. Predestination is the decree of God concerning a special manifestation of His glory in the eternal state of men. Rom. 9. 22, 23; 1 Thes. 5. 9.

1136. And is election or rejection.

1137. Election is the predestination of certain men that in them the glory of God's grace might be manifested. Eph. 1. 4, 5, 6; 2 Thes. 2. 13. Rom. 9. 13.

1138. Rejection is the predestination of certain others that in them the glory of God's justice might be manifested. Rom. 9. 22; 2 Thes. 2. 9. Jude 4; Phil. 3. 9.

1139. The parts of application are union and communion.

1140. Union is that spiritual relation between men and Christ by which they attain the right to all those blessings which are prepared in Him. 1 John 5. 12; and 3. 24.

1141. It is accomplished by calling. Rom. 8. 30.

1142. Calling is the gathering of men to Christ as loved by Him. 1 Pet. 2. 4, 5; Eph. 4. 12.

1143. Calling has antecedents and parts.

1144. The antecedent is preparation.

1145. Preparation consists in the application of the law to the sin to be forgiven. Rom. 7. 7.

1146. The effects of this application of the law are contrition and humiliation by which the soul is cut off from the wild olive tree and grafted upon one that is good by nature, *viz.*, upon Christ. Rom. 11. 23, 24.

1147. The parts are Christ's offering and reception.

1148. Christ's offering is his being set up before us as the sufficient medium and absolutely necessary means for salvation. 1 Cor. 1. 23, 24. Heb. 7. 25. Act. 4. 12, etc.

1149. Christus affectur externe vel interne.
1150. Receptio Christi est qua Christus oblatus conjungitur hominis et homo Christo. Jno. 6. 56.
1151. Estque passiva vel activa.
1152. Receptio Christi passiva est qua spirituale principium gratiae ingeneratur hominis voluntati, Eph. 2. 5.
1153. Receptio Christi activa est elicited actus fidei qua vocatus jam totus in Christum recumbit ut suum servatorem et per Christum in Deum. Jno. 3. 15, 16; Pet. 1. 21.
1154. Cum isto actu fidei conjungitur recipiscentia.
1155. Recipiscentia est qua voluntas convertitur ad bonum agendum cum aversione et odio contrarii mali. Marc. 10, 15.
1156. Tantum de unione. Communio est qua fideles participes fiunt omnium eorum quibus opus habent vivendum. Eph. 1. 8. 13.
1157. Adfert haec communio mutationem status a statu scilicet peccati et mortis ad statum justitiae et vitae aeternae. Jno. 3. 14.
1158. Estque relativa vel realis seu absoluta.
1159. Relativa mutatio est quae in reputatione Dei consistit. 2 Cor. 15. 19.
1160. Estque justificatio vel adoptio.
1161. Justificatio est sententia Dei gratiosa qua propter Christum fide apprehensum fidelem absolvit a peccato et morte et justum reputet ad vitam. Rom. 3. 22, 24. Rom. 8. 33. Rev. 7. 15.
1162. Adoptio est sententia Dei gratiosa qua fideles acceptat propter Christum ad filiorum dignitatem. Jno. 1. 12; Jno. 3. 1.
1163. Realis commutatio status est alterio qualitatibus in ipso homine facto. 2 Cor. 5. 17; 3. 18.
1164. Estque sanctificatio vel glorificatio. Rom. 6. 23.
1165. Sanctificatio est realis commutatio hominis a turpitudine peccati ad puritatem imaginis Dei. Eph. 4. 22, 23, 24. Ezech. 36. 26, 27.
1166. Consistit in mortificatione et vivificatione.
1167. Glorificatio est realis transmutatio hominis a miseria vel poena peccati in foelicitatem aeternam. Rom. 5. 5. etc.
1168. Hinc certitudo salutariae.

1149. Christ is bestowed externally or internally.
1150. Christ's reception is when Christ after being offered is joined to man and man to Christ. John. 6. 56.
1151. And is passive or active.
1152. The passive reception of Christ is where the principle of grace is spiritually generated in the human will. Eph. 2. 5.
1153. The active reception of Christ is the act elicited by faith whereby the person called now rests entirely and through Christ in God. John 3. 15, 16; 1 Pet. 1. 21.
1154. With this act of faith is connected reciprocity.
1155. Reciprocity is where the will is turned to doing good with an aversion and hatred of the contrary evil. Mark 10. 15.
1156. So much for union. Communion is that by which the faithful become participators of all those things of which they have need for living a good and blessed life for God. Eph. 1. 8, 13.
1157. With this communion there goes a change of status from the state, *i.e.*, of sin and death to the state of righteousness and eternal life. Jno. 3. 14.
1158. And it is either relative or real, absolute.
1159. Relative change [of state] is that which consists in our reputation before God. 2 Cor. 15. 19.
1160. And is justification or adoption.
1161. Justification is God's gracious judgment by which He absolves the faithful on account of his acceptance of Christ by faith, from sin and death and reposes him righteous unto life. Rom. 3. 22, 24. Rom. 8. 33. Rev. 7. 15.
1162. Adoption is the gracious judgment of God whereby He accepts the faithful through Christ unto the dignity of His children. Jno. 1. 12; 1 John 3. 1.
1163. The real change of status is the change of qualities made in that man. 2 Cor. 5. 17; 3. 18.
1164. And is sanctification or glorification. Rom. 6. 23.
1165. Sanctification is the real change in a man from the depravity of sin to the purity of the image of God. Eph. 4. 22, 23, 24. Ezech. 36. 26, 27.
1166. It consists in mortifying and vivifying.
1167. Glorification is the real change in man from the misery and pains of sin to eternal felicity. Rom. 5. 5, etc.
1168. Hence the assurance of salvation.

1169. Applicationis sunt subjectum et modus.
1170. Subjectum est ecclesia. Eph. 5. 25, 26, 27.
1171. Ecclesia est coetus hominum vocatorum. 1 Cor. 1. 24. & 10, 32.
1172. Ecclesia est triumphans vel militans.
1173. Ecclesia triumphans est quae jam consummata est. Eph. 4. 13.
1174. Ecclesia militans est quae incohatae tantum communionis est particeps. 1 Cor. 13. 9, 12; 2 Cor. 10. 3; Eph. 6. 12, 13.
1175. Estque visibilis vel invisibilis.
1176. Visibilitas iste est in congregationibus.
1177. Congregatio hujus modi particularis est societas fidelium visibilium speciali vinculo inter se conjunctorum ad communionem sanctorum constanter inter se exertendam.
1178. Modus applicandi in iis consistit quae sunt media spiritus applicantis nobis Christum et ejus beneficia ad salutem.
1179. Constituitur ac variatur.
1180. Constituitur per ministerium sacramenta et disciplinam sacram.
1181. Ministerium est functio ecclesiastica qua homo scelectus jure speciali res sacras dispensat. 2 Cor. 9. 12.
1182. Ius ministerii pendet ex vocatione. Heb. 5. 4.
1183. Vocatio est qua cum autoritate ministrandi munus alicui demandatur.
1184. Ratio et directio operationum ministeria est politia ecclesiastica.
1185. Politiae hujus forma est plane Monarchica respectu Christi capitis ac regis, sed respectu
1186. Vicariae administrationi est partim aristocratica partim democratica.
1187. Sed nullum locum habet hierarchia sed potius hierodulia.
1188. Estque ministerium ut nomine Dei agantur apud populum et nomine populi agantur apud Deum quae sunt agenda.
1189. Ministerium est extraordinarium vel ordinarium.
1190. Ministerium extraordinarium est quod altiore quam ordinariis mediis posset haberi.
1191. Ministri extraordinarii fuerunt prophetae, evangelistae ac apostoli quibus S. S. Scriptura.

1169. Application [of redemption] has a subject and modes.
1170. The subject is the church. Eph. 5. 25, 26, 27.
1171. The church is the gathering of those who are called. I Cor. 1. 24; and 10. 32.
1172. The church is triumphant or militant.
1173. The church triumphant is that which is already completed. Eph. 4. 13.
1174. The church militant is that which is a partaker of merely incomplete communion. 1 Cor. 13. 9, 12; 2 Cor. 10. 3; Eph. 6. 12, 13.
1175. And is visible or invisible.
1176. This visibility consists in congregations.
1177. A congregation of this kind is a particular society of the visible faithful united to each other by a special bond for the constant practice of a sound communion among them.
1178. The method of application in them consists in those things which are means of the spirit in bringing to us Christ and His benefits toward salvation.
1179. The church is constituted and variegated.
1180. It is constituted by the ministry, the sacraments, and the sacred discipline.
1181. The ministry is the ecclesiastical function by which a man selected by a special right administers sacred things. 2 Cor. 9. 12.
1182. The right of ministering depends on the call. Heb. 5. 4.
1183. The call is when with authority the task of ministering is demanded of someone.
1184. The ground or direction of the operations of the ministry is ecclesiastical polity.
1185. The form of this polity is clearly monarchical in respect of Christ's headship and kingship, but in respect of
1186. Its vicarious administration it is in part aristocratic and in part democratic.
1187. But there is no place for a hierarchy, or rather a *hier*-slavery.
1188. And the ministry is as if what is to be done is done for the people in the name of God, for God in the name of the people.
1189. The ministry is extraordinary or ordinary.
1190. Extraordinary ministry is that which is under a higher and more perfect direction than could be had by ordinary means.
1191. The extraordinary ministers were prophets, evangelists, and apostles of the Holy Scriptures.

1192. S. S. Scriptura est voluntas illa Dei revelata quae est regula fidei ac morum.
1193. Ministerium ordinarium est quod totam suam directionem habet a Scripturis et est ad ecclesiam ordinariis mediis restaurandam propagandam et conservandam.
1194. Sacramentum Foederis Novi est institutio divina qua per sensibilia signa Christus et benedictionis Foederis Novi repraesentantur exhibentur ac applicantur.
1195. Disciplina sacra est personalis applicatio voluntatis Dei per censuras ad scandala vel cavenda vel tollenda ex ecclesia Dei.
1196. Estque correctio fraterna vel excommunicatio.
1197. Variatur hic modus. Est enim vel Christi exhibendo vel exhibendo vel hibiti ad ista duo capita referuntur Testamentum Vetus et Novum.
1198. Testamentum vetus promissit Christum venturum; haec administratio est obscurior.
1199. Modus Christi exhibiti est a Christo ad finem mundi vel in ipso fine.
1200. A Christo ad finem mundi est uniusmodi administratio plane nova; hinc Testamentum novum dicitur.
1201. Testamentum novum testatur Christum venisse.
1202. Ejus duo sunt sacramenta, baptismus et coena eucharistica.
1203. Baptismus est sacramentum initiationis et regenerationis; signum est aqua.
1204. Sacra coena est sacramentum nutritionis et aunionis fidelium in Christo; signum est panis et vinum.
1205. In fine mundi applicatio ista perficietur quae in haec vita tantum incohatur.
1206. Finalis haec administrationis perfectio postulat adventum et personalem praesentiam Christi. Act. 10. 45.
1207. Tum erit discretio inter pios et impios.
1208. Cui inserviunt duo actus: Resurrectio scil. et iudicium illum ultimum. 2 Cor. 5. 10.
1209. Iudicium ultimum exercetur a Christo tanquam a rege.
1210. Haecenus de primo actu vitae spiritualis in primo parte Theologiae. Sequitur secundus; in secunda estque observantia.

1192. The Holy Scriptures are the revealed will of God which is the rule of faith and conduct.

1193. The ordinary ministry is what takes its whole direction from the Scriptures, and exists for restoring, advancing, and preserving the church by ordinary means.

1194. A sacrament of the New Covenant is a divine institution by which through sensible signs Christ and the blessings of the New Covenant are represented, exhibited and applied.

1195. The sacred discipline is the personal application of the will of God through the censuring of the stumbling blocks which the church of God must either guard itself against or remove.

1196. And is brotherly reproof or excommunication.

1197. [The church] is variegated in the following ways: It is either of Christ to be exhibited, or of Christ exhibited. To these two heads the Old and New Testaments are referred.

1198. The Old Testament promises that Christ will come; this administration is the more obscure.

1199. The way [of administration] of Christ exhibited is either from Christ to the end of the world or at its end.

1200. From Christ to the end of the world is a kind of administration clearly new; hence called the New Testament.

1201. The New Testament bears witness that Christ has come.

1202. It has two sacraments; baptism and the eucharist.

1203. Baptism is the sacrament of initiation and regeneration. Its sign is water.

1204. The sacred meal is the sacrament of nourishment and growth of the faithful in Christ; its sign is bread and wine.

1205. At the end of the world this application will be completed, which in this life is but incomplete.

1206. This perfection of the final administration is based on the advent and personal presence of Christ. Act. 10. 45.

1207. Then there will be a separation of the godly and ungodly.

1208. To which two acts are attached: *viz.*, the resurrection and the last judgment. 2 Cor. 5. 10.

1209. The last judgment is presided over by Christ as king.

1210. So far concerning the first act of the spiritual life in the first part of theology. There follows the second, and in the second is observance.

1211. Observantia est qua Dei voluntas in ipsius gloriam cum subiectione praestatur. Mat. 26, 44; Ps. 40. 9; Rom. 8. 7; 1 Cor. 10. 31.
1212. Lex enim quidem quoad vim justificandi est quasi abrogata fidelibus sed manet ad huc quoad vim dirigendi scil. Regula vitae.
1213. Observantiae sunt membra et species.
1214. Membra sunt virtus et actio virtutis.
1215. Virtus est habitus quo voluntas inclinatur ad bene agendum. Heb. 4. 14. Rom. 7. 19 & 20, 21, 23.
1216. Virtutis affectiones sunt Iustitia et Prudentia, Fortitudo, et Temperantia dicuntur virtutes cardinales.
1217. Iustitiae est virtutis rectitudo. Phil. 4. 8.
1218. Prudentia est qua adhibentur omnes rationes vires ad bene agendum. Col. 1. 9. Eph. 4. 17.
1219. Fortitudo est firma persistentia in bene agendo. Act 4. 29. Phil. 1. 14. Apoc. 2. 26. Heb. 10. 36.
1220. Temperantia est qua sedantur ac cohibentur omnes illae cupiditates quae divertunt a bene agendo. 2 Tim. 2. 4; 1 Pet. 1. 13; 2 Pet. 1. 4.
1221. Actio virtutis est operatio fluens ex virtutis dispositione. Mat. 12. 35; 2 Cor. 8. 10, 11; Jac. 2. 22.
1222. Observantiae species sunt religio vel iustitia. Mat. 22. 37. Rom. 1. 18. Tit. 2. 12.
1223. Religio est observantia qua illa praestantur quae directa ad Deo honorem deferendum spectant. Rom. 1. 21; 2 Cor. 5. 8; 1 Cor. 10. 31; Mat. 6. 23.
1224. In prima tabula legis mandatur.
1225. Ejus sunt actus et adjuncta.
1226. Actus religionis est cultus.
1227. Cultus est naturalis vel institutus.
1228. Cultus naturalis est qui pendit ex natura Dei. In primo praecepto mandatur.
1229. Cultus naturalis vel tendit in Deum vel ut bonum nostrum vel ut bonum in se.
1230. Ut bonum nostrum est in praesentia vel futuro. Hinc fides et spes. 1 Cor. 13. 13.

1211. Observance is that [act] in which the will of God to His own glory has sway and is accompanied by subjection. Mat. 26. 44; Ps. 40. 9; Rom. 8. 7; 1 Cor. 10. 31.

1212. For the law taken as having power of justification is, as it were, abrogated, but it remains in so far as it is taken as a power of guidance, *viz.*, as the rule of life.

1213. Observance has members and species.

1214. Its members are virtue and action according to virtue.

1215. Virtue is the state in which the will is inclined toward well-doing. Heb. 4. 14. Rom. 7. 19 and 20, 21, 23.

1216. The modes of virtue are justice and prudence, courage and temperance, called the cardinal virtues.

1217. Justice is uprightness of virtue. Phil. 4. 8.

1218. Prudence is that whereby all the powers of reason are focussed on well-doing. Col. 1. 9. Eph. 4. 17.

1219. Courage is the firm persistence in well-doing. Act 4. 29. Phil. 1. 14. Rev. 2. 26. Heb. 10. 36.

1220. Temperance is whereby all those desires which divert us from well-doing are allayed and coördinated. 2 Tim. 2. 4; 1 Pet. 1. 13; 2 Pet. 1. 4.

1221. An action according to virtue is an operation flowing from a disposition to virtue. Mat. 12. 35; 2 Cor. 8. 10, 11; James 2. 22.

1222. The species of observance are religion and justice. Mat. 22. 37. Rom. 1. 18. Tit. 2. 12.

1223. Religion is the observance whereby those things are given sway which directly lead to giving God the honor. Rom. 1. 21; 2 Cor. 5. 8; 1 Cor. 10. 31; Mat. 6. 33.

1224. It is commanded in the first table of the law.

1225. It has acts and adjuncts.

1226. The act of religion is worship.

1227. Worship is natural or instituted.

1228. Natural worship is that which depends on the nature of God. It is commanded in the first commandment.

1229. Natural worship leads to God either as our good or as good in Himself.

1230. As our good it is either in the present or future. Hence faith and hope. 1 Cor. 13, 13.

1231. Fides est cultus naturalis tendens in Deum ut bonum nostrum praesens quo Dei fidelitate adhaerentes nitimur ipso ut quod nobis proponat consequamur. Jno. 1. 12 & 3. 33. ut est in intellectu et voluntate.
1232. Spes tendit in Deum prout futurus est qua expecta cum ea quae Deus promisit. 1 Pet. 1. 13.
1233. Qui tendit in Deum ut bonum in se est charitas qua diligimus Deum ut summum bonum. Jno. 4. 16, 19.
1234. Actus cultus naturalis sunt auditio verbi et oratio.
1235. Auditio Verbi est religiosus receptio Voluntatis Dei. Jer. 13. 15.
1236. Oratio est religioso repraesentatio voluntatis nostrae coram Deo ut illa ille quasi afficiatur. Jno. 13. 13, 14; & 15. 23.
1237. Ejusque membra sunt petitio vel gratiarum actio.
1238. Estque oratio mentalis vel vocalis.
1239. Vocalis est vel prosa vel metro in quo conjunctus est cantus.
1240. Petitionis modi duo sunt particulares juramentum et sors.
1241. Juramentum est petitio testimonii divini ad testimonii nostri veritatem confirmandam. Heb. 6. 13, 16; 2 Cor. 1. 20.
1242. Sors est petitio divini testimonii in mera contingentia manifestando ad controversiam aliquam derimendam.
1243. Cultus institutus est medium ex voluntate Dei ordinatum ad cultum naturalem exercendam ac promovendam. Mat. 15. 9.
1244. Qualia sunt praedicatio Verbi, oratio, sacramenta, disciplina, etc. In secundo praecepto praecipitur.
1245. Adjuncta sunt modus et tempus.
1246. Modus est legitimus usus eorum quae ad Deum spectant.
1247. Legitimus usus in eo consistit ut omnia quae ad cultum pertinent ita tractentur ut congruit majestati divinae. Tertio praecepto mandatur.
1248. Tempus cultus maxime sollemnis fuit cujusque Septimanae diei septimus nunc post Christum dies primus dicitur dominicus. Rev. 1. 10.

1231. Faith : the natural worship leading to God as our present good, by which clinging faithfully to God we rest in Him so that we perform what He points out to us. John 1. 12 and 3. 33. So that it is in the intellect and in the will.

1232. Hope leads to God in so far as He is future, and by it those things are expected which God promises. 1 Pet. 1. 13.

1233. What leads to God as a good in Himself is love by which we prefer God as the highest good. John 4. 16, 19.

1234. The natural act of worship consists of the hearing of the word and of prayer.

1235. The hearing of the word is the religious reception of the will of God. Jer. 13. 15.

1236. Prayer is the religious presentation of our will in the presence of God so that, as it were, He may be affected by it. John 13. 13, 14; and 15. 23.

1237. Its parts are petition and giving thanks.

1238. And prayer is either mental or vocal.

1239. And vocal prayer is either in prose or meter, to which is joined song.

1240. Petition has two particular modes—the “oath” and the “oracle.”

1241. The “oath” is a petition for divine testimony confirming the truth of our testimony. Heb. 6. 13, 16; 2 Cor. 1. 20.

1242. The “oracle” is a petition for divine testimony manifested in a pure contingency for the sake of settling some controversy.

1243. Instituted worship is the medium ordained by the will of God for the exercise and promotion of natural worship. Mat. 15. 7.

1244. Such are preaching of the word, prayer, the sacraments, discipline, etc. They are commanded in the second commandment.

1245. The adjuncts are manner and time.

1246. Manner is the legitimate use of those things pertaining to God.

1247. The legitimate use in this matter consists in so conducting all things pertaining to worship that they are congruous with the divine majesty. This is commanded in the third commandment.

1248. The time of worship which was the most solemn was that of the seventh day but now since Christ the seventh day is called the first day, the Lord’s day. Rev. 1. 10.

1249. Observatur quiete et quieti sanctificatione. Quarto praecepto mandatur.
1250. Haec tenus religio, sequitur justitia seu charitas proximi quae est observantia qua debitum officium proximo praestatur.
1251. Secunda tabula decalogi mandatur.
1252. Et afficit proximum immediate vel mediate.
1253. Immediate afficiens respicit gradum conditionis vel conditionem absolute.
1254. Quoad gradum est honor.
1255. Honor est justitia quae est cognitio dignitatis vel excellentiae quae est in proximo cum debita ejus testificatione. Quinto mandato.
1256. Quae respicit conditionem proximi absolute respicit ejus personam vel commoda externa.
1257. Quae respicit personam proximi respicit ejus vitam et puritatem.
1258. Vitam proximi respicit humanitas.
1259. Humanitas est justitia qua vitam proximi et ejus tranquillitatem legitimi modus conservare studemus. Sexta mandato.
1260. Puritatem proximi respicit chastitas.
1261. Chastitas est justitia qua puritas personae conservatur quoad illa quae spectant ad generationem. Septimo mandato.
1262. Sequitur quae respicit commoda externa ut justitia commutativa.
1263. Justitia haec est qua suum cuique in commodis externis tribuitur. Octavum mandatum.
1264. Quae afficit proximum mediate sequitur et est veracitas vel contentatio.
1265. Veracitas est qua veritas observatur in testimonii dicendo. Nonum mandatum.
1266. Contentatio est qua animus quiescit in suate a deo concessa. Decimum mandatum.
1267. In omnibus dicitur ego sum mihi proximus vide de omnibus D. R. G. Amesium in Medulla Theologiae et Casibus Conscientiae.

Finis

1249. It is observed quietly and with quiet holiness. This is commanded by the fourth commandment.
1250. So far religion. There follows justice or love of neighbor, which is the observance by which we observe our duty to our neighbor.
1251. It is commanded by the second table of the decalogue.
1252. And it affects our neighbor immediately or mediately.
1253. Affecting him immediately it pertains to the social scale or to some absolute condition.
1254. As to the social scale it is honor.
1255. Honor is justice which takes cognizance of the dignity and excellence which is in our neighbor, together with due testimony of it. Commanded by the fifth.
1256. What pertains to the condition of my neighbor absolutely pertains to his person or to his external goods.
1257. What pertains to his person pertains to his life and purity.
1258. The life of my neighbor is the object of humaneness.
1259. Humaneness is justice by which we seek to preserve by legitimate means the life and peace of our neighbor. It is commanded by the sixth.
1260. The purity of my neighbor is the object of chastity.
1261. Chastity is justice by which the purity of person is preserved in matters pertaining to reproduction. It is commanded by the seventh.
1262. Now follows what pertains to external goods or commutative justice.
1263. This justice is that whereby each has his own external goods attributed to him. The eighth commandment.
1264. Now follow the things pertaining to my neighbor mediately and they are veracity and contentment.
1265. Veracity is that whereby the truth is observed in giving testimony. The ninth commandment.
1266. Contentment is that whereby the soul is satisfied with his own God-given property. The tenth commandment.
1267. In all things it is said, I am my neighbor. See about anything D. R. G. Ames in *Medulla Theologia* and *Cases of Conscience*.

The End

1268. Omnis actis universa compraehensio dicitur et rectissime
Disciplina in circulo

1269. Encyclopaidia est omnis, artis circularis comprehensio pro
subordinatione finium qua res emanant ab ente primo et ad ipsum
denuo redeunt.

1270. Ejus amor est Philosophia.

1271. Ejusque cognitio est pansophia quid est omnium cognitio.
Hisce subsequuntur omnes facultates tam superiores ut Theologica
Jurisprudentia, Oeconomica, etc. Quam infer res ut omnes me-
chanicae quae improprie dicuntur artes.

Finis — 1271 Theses

1268. The universal comprehension of all the arts is called, and rightly so,

a circular discipline.

1269. Encyclopedia is the circular comprehension of all the arts in the interest of the subordination of ends, and according to it things emanate from primary being whither they finally return.

1270. Its love is philosophy.

1271. Its knowledge is *pansophia*, since it is the knowledge of all things.

And from these there follow all the faculties, the superior, as theology, jurisprudence, economics, etc.; as well as the inferior, as all the mechanical (improperly called) arts.

End — 1271 Theses

APPENDED

1. All atoms are either self-moving such as have a principle of motion in themselves and are the principle of motion in mixed bodies, whence *Hot*.
 2. or Quiescent and have no motion at all but are moved of others and are the principle of immobility or dullness and sluggishness in mixed. *Cold*.
 3. Of the former sort some are more motive and full of sharp points, hence by their motion tear and rend where they move if not suppressed by other atoms, or parts but if set on motion make way. *Fire*.
 4. Others are more smooth and slippery hence tho' they move yet rend and tear not, hence moist *Air*.
 5. Of the latter some being quiescent and smooth and slippery and stickish if squeezed together they cleave one to the other and are cold and moist *Water*.
 6. Others tho' they are quiescent and void of all self-motion (which is the reason why they rend not) yet they are exceeding full of craggs and points and if in a body full of caverns, to receive others hence they are exceeding dry as well as cold *Earth*.
 7. These in mixed bodies if the first predominate, the body is hot, if the second, moist, if the third, cold, if the fourth, dry.
- Our ideas are either of the superstratum, as relations and names, or of the substratum or sustentamentum of them.

Natus mi Octobris 15, 1696.

Hanc Encyclopaïdïam feci 1713.

Aetatis Anno 17.

Liber Anno Domini 1714

Annoque Mundi 5663

November 11, 1714.

Finitum Opus

Thanksgiving Day's Night.

(And by next Thanksgiving, November 16, 1715, I was wholly changed to the New Learning. *Vide* tother Red Book.)⁶

⁶ Inserted later. Cf. pages 57 and 60. "Tother Red Book" is the Introduction to Philosophy published in Part IV of this volume. [The Editors.]

PART III

CORRESPONDENCE WITH DANIEL BROWN
ABOUT THE ENCYCLOPEDIA

This correspondence dates from the years 1714 to 1716. The two college chums coöperated in what they regarded as an epoch-making work. During these years the reading of Bacon and Locke wrought a profound change in Samuel Johnson's mind, which is reflected in this correspondence. The Latin of the first letter is, of course, corrupt and difficult to decipher. No attempt has been made to correct or annotate the obvious errors in the manuscript.

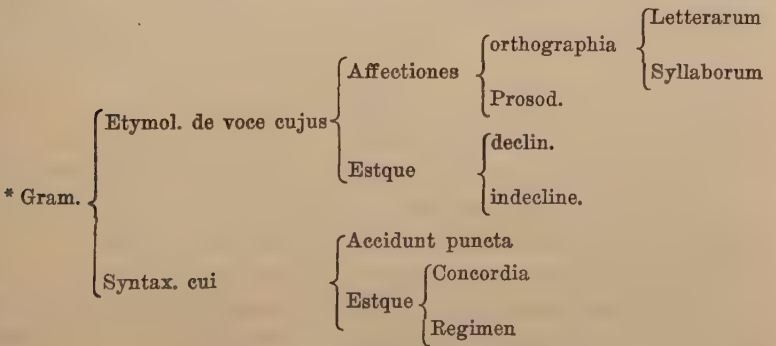
[The Editors.]

TO MR. DANIEL BROWN, STUDENT IN THE COLLEGIATE SCHOOL AT
 SAYBROOK. FEB., 1714.

ENCUCLOPAIDIA

Amice mi charissime ac inter Doctos praestatissime optima doctrina indute valeo (Gratias Deo) tubeo atque; spero te valere tempus valde producit dum a conspiciendo faciem tuam sum dolentus. Qualis enim est mihi optima foelicitas donec habeo istum favorem radios tuae faciei coruscantes conspiciendi. Dum vero potuero imaginem uxoris tuae pulcherrimae conspiciere non omnino sum a foelicitate alienus. Sed multo foelicior cum ex tuo ipsius ore eius excellentias exundio. Verba inquam aurea e tuo ore procedentia forsitan vero si facie ad faciem te conspicerem rogares quomodo valet uxor? i. e. Quomodo valet Domina illa praestantissima τεχνη [?] Si ita hunc in modum respondere quod nunc quidem valet sed non valebat per totum hoc tempus quam enim eiusdem pulchritudinem intuitus fui quondam vidi inter eius ornamenta (scil. in methodo) maculam inter te meque disceptam. In intuendo enim technologiam vidi Artis Archetypae eupraxiam defectivam cum debet cum Gubernatione addi Providentiae, deinde cum peraeta fuit Logica nulla. In Grammatica vero orthographiam et Prosodiam non generaliter competere ei vidi idem hunc in modum* in caeteris mendas ad huc non video.

Sed nunc in omnibus Harmoniam inexpressam! Tuam itaque



uxorem valere optima cum salute spero. Libere enim loqui licet spero, te enim a pura encyclopaedia in fabulas Peripateticas neophilosophiasque non esse conversum presumo. Et nunc chare frater, orata omnium mendarum in scriptis remissio ne simul atque tuarum mihi litterarum lectione cum voluntaria mea servitute ad omnes scholasticos concurrentes praecipua vero ratione ad Blayne illum optimum, accipio (ut dixisti) Libertatem subscribendi me ipsum ad tuam manum servum perpetuum

Amicumque cordatum aeternum

Sam. Johnson

e mussaeo meo Februarii idibus 1713/14

TO DANIEL BROWN, BACHELOR OF ARTS, AT NEW HAVEN
JUNE 20, 1715.

PRAECLARISSIMO ac FIDELISSIMO AMICO

Domo. Danieli Brown, S. D.

I. *Dilectissime Domine*: Yours of May ult. I received *Praeloquium* with great joy which I thank you for wherein I hear of your health of which I am glad, and I may take occasion to say the like of myself through divine favor.

II. But to return etc. — I shall observe our wonted method — and what I find remarkable in your answers not yet cleared up is that discourse of the parts of logic.

Q. 1. The first thing you suggest is whether the two modes of judgment, *viz.*, axioms and syllogisms, are not as really distinct as invention and judgment.

A. 1. I answer Nay. Considering (1) that phantasy and judgment are acts of the soul, whereas making axioms and syllogisms are acts of the judgment, so that it does not at all destroy the conveniency of the dichotomy (which if they were as really distinct etc. I do not see how they would do). Considering (2) that phantasy respects the several simple parts of intellectual materials out of which we make our intellectual fabric or idea, when as judgment regards the making of the latter out of the former, the first act of the soul considering (as I may say in a similitude) the timber separately, the second — the composition of it, raising the house, doing two things, first putting of it together only, axioms; secondly

bracing it and thereby strengthening of it, as syllogisms. Now I query whether there be so much difference between strengthening the house already raised, and raising of it, as there is between raising of it and framing of it or preparing the materials. I trow not. For a syllogism is only adding another simple relation for the confirmation of the agreement or disagreement of the former relation to the comp. idea. So that I think that there is only a gradual difference between axioms and syllogisms, the first clothing the completed idea with some one relation, and the second adding another, as it were putting on another garment upon it. The axiom puts on one thickness, the syllogism adding puts on another.

Q. 2. You say you would agree with me, etc., did you not think that method had a further reach than only *ad memoriam*.

A. 2. If it does help the judgment it is not the disposition of the compound ideas in relation one to the other that does that, as such, but this disposition of compound ideas orderly only helps the judgment to see the disposition of the simple ideas illustrating and proving the illustration of the compound ideas and that only accidentally either — not merely as method but as this end can't be attained without that. So that I think I can't see any inconvenience but rather convenience in making these dichotomies.

III. As to your answers to my questions you very well satisfy me only as to axioms wherein I hope if you reflect upon yourself, *i.e.*, the actions of your mind, I think you will find that *connex* and *discrete* are only modes of putting two simple axioms together in relation one to the other as well as *copul.* and *disj.* And as touching patterning, Sir, I humbly thank you for your joke. And as to limning I think it is only an imitation of the soul in its acts, for we find that the soul takes the same steps in making ideas as a limner does in making pictures, hence the faculty of limning is only the ape of logic.

IV. As to your questions, and the same course of thoughts I conceive brought both these scruples, and I shall invert your order and endeavor to answer your last question first which is

Q. 1. Whether the object of art in general be not *ens*, etc.

A. 1. I answer, Sir, I must confess that by reason of my other diverting studies I have not had occasion lately to think of it, but about some six weeks ago I did think to my own satisfaction thus. That technology is the doctrine of ideas improved in being conver-

said about, for the ordering of actions, or thus technology is in general the doctrine of all sorts of ideas and after a considerable prefatory and explicatory discourse of the general nature of ideas, to consider idea two ways. (1) First as being only human knowledge or learning without relation to practice and so to be called philosophy, and the object of idea thus considered to be *ens*, and that considered not as matter but as the disposition of its parts and the several relations of it, properly to be the object of idea. (2) Considering idea as having relation to practice and so the name of idea thus considered should be *art*, and the object of idea representing should be *eupraxy* and the end of this idea thus representing should be direction of the actions of any who should appear to attend the directions thereof. So that I thought that this distinct consideration of idea might solve the scruple of your mind of which you make question.

Q. 2. As to your second question or rather your first, whether the actions of the mind be not the object of logic and the end thereof *eupr. rat.*? Sir, I conceived

A. 2. In answer that a consideration of *Ars Archetypa* being premised as a digression that art being distributed into semiotical and real, the first being ideas of signs both mental as logic, and vocal as grammar, first idea of ideas and the second ideas of the signs expressive of ideas both considered as having relation to practice, the second *scil.* being particular ideas of particular things in the other arts having relation to particular practices. Now the first of these being logic which is the idea of ideas which does represent and direct the motions of the soul, I conceive that the motions of the soul being represented and directed by logic are nothing else but *eupraxia rationis*. I conclude you will grant: (1) That logic is the idea of the soul in its rational actions. (2) That being so it does represent and direct them. (3) That these rational actions of the soul *scil.* phantasy and judgment, are consequently nothing else but *eupraxia rationis*.

Q. 3. Your third question subjoined to your letter, *scil.*, how preaching feels may be thus answered:

A. 3. It feels *formidabile et perquam difficile in initio, et grave etiamque facile in progressu, sed laetum et plusquam dulce in conclusione*. But Sir, I believe that as to the particular feeling of it I believe it is so inexplicable that you will never be fully answered till you do (which I desire you may and hope you will) try and

experience yourself. I doubt not but that you will feel exactly and every way as I did.

V. Sir, as to your advice I humbly and heartily thank you for it.

I hope I may embrace it but yet fully to leave that which you warn me against the excess of, I believe you would not desire. For give me leave to offer you a three-fold article of advice, *viz.*:

(1) Not to live wholly without diverting of your mind without feminine society a little whereof I conceive to be pleasant and yet not hurtful. (2) Not to study too hard. (3) To write your letters in a smaller character that they may contain the more. And I would subjoin that our lecture is next Wednesday. I advise you to come over to it.

VI. Sir, I should have premised a question or two to my *Conclusio* advice but having not studied lately on philosophy I have no scruples on my mind but only that whether what I have said in answer to your questions may be consensual to the truth an answer to which I expect, etc. What remains is humbly to offer the testimony of my gratitude to your worthy parents and you yourself as likewise respects to your lady, if you have one. I trust you will send yours to mine, which having done

I hope you will acknowledge me to be

Yours in both immemorable and eternal obligation of loyal friendship and service and so God be w' ye —

S. Johnson.

From my study in Guilford

June 20. Anno 1715.

I hope to hear from you by the next.

DANIEL BROWN TO MR. SAMUEL JOHNSON, A. BAC., S. MASTER, IN
GUILFORD. AUG. 3. 1716.

Much esteemed Sir:—

The variety and barbarity of my multiplicitous affairs have caused me (I do not say to forget you but) to neglect writing to you hitherto, and though I do write, my time has been so incumbered with alien negotiations, which were impediments to my wonted lucubrations, that I cannot give you that entertainment which otherwise I might possibly have done. However, Sir, please to accept it as the cost.

And first of all I would inform you how my mind doth acquiesce, and with what perceptions touching the matters philosophical which were in agitation between us. And first as to philosophy in general I think we were pretty well agreed, that it is a universal compendium of human knowledge; that this knowledge does consist in the perception of various ideas and their several relations; that these ideas and representations have a two-fold end, *sc.*, the enlargement of the mind by a scientific contemplation, or *Theoria*, and the direction of a person in the practical application of these our acquirements, whence it is called art. Furthermore, that some of the parts of philosophy according as they are more eminently tending to practice or less, may be called κατ' ἐξωζήν, art, or science. More particularly as to the division of philosophy we were confirmed in this that they were general and acquiring or special and acquired; the former being a *propaedia* and furnisher of us well to search after truths; the latter the knowledge itself, which varies according to the variety of subjects which fall under our cognizance, etc. Which I mention not because I think you are ignorant, but only by way of recapitulations. As for history I have some such thoughts as these. The ideas we have, seem to be formed after this manner: (1) (which is very obvious) we discover the number, quantity, figure, proportions of things of which there is great use in human affairs, hence arise several sciences — arithmetic, geometry, astronomy, music, optics, etc. — comprehended under the general name *mathesis*. (2) We see certain operations of nature which if we dive into, we find very mysterious, the ideas we have of those together with all the parts of the creation constitute *physics*. (3) Viewing the harmony of the All, the parts of the immense universe, which hath been and still is conspicuous, we discover an illustrious providence, which does not only preserve, but rule and govern all things, directing them each to its proper ends, the recording the particular passages whereof is (what you call) *history*. Now concerning this, it must be granted that herein is contained knowledge, there are ideas, but the question is whether these ideas do differ in their objects from the ideas delivered in other sciences, which I am not satisfied in. And my thoughts I shall offer (not for dispute's sake, but) for the sake of coming at the truth. And the considerations I have been meditating upon are these:

- (1) The only reason why the particular passages of matters of

fact should require a separate consideration, is because they sustain the relation of effects of divine providence and are argumentative of it (nothing else was offered in your last). Now, Sir, I cannot acquiesce in this as a strong foundation. For in this respect it does, as well as the works of creation, pertain entirely to theology, the very principles of natural divinity being said herein, *viz.* the works of creation and providence. Rom. I, 18, 19, 20.

But (2) as to all the other relations which (as I know of) it can sustain, it does not seem to be a distinct science, but as it were a handmaid to them all. Particularly the several objects that are handled in history, are reducible to some of the sciences, and are here considered only with this difference, that they are matters of fact, which that it should make so great a distinction I see no reason. Very particularly the chief thing delivered in history is political affairs, which, who knows not, how very useful they are in the administrations of *politia* in after ages. Now, Sir, are we not wont to say that the rules of art are grounded upon experience; now pray what are these but experiments, which serve to instruct us in managements of that nature, either how it should be carried on, or how we should do it (and the like may be said of the other arts). Sir, I see no more reason to make it a distinct science, than experimental philosophy distinct from that which is purely speculative. In short it seems more likely to be a sort of artificial memory, not a real distinct science, but that which is of use to us in acquiring them. As to logic there are many things which I want satisfaction in which I will not now mention, but tarry till next time.

I have of late gained some sort of friendship with one of the Cambridge scholars, now Senr. Soph., Mr. Thomas Pain of Barnstable, whom I never yet saw, but have heard of his worth. I shall acquaint you with some passages occurring in his letters. He gives me account of several matters. *Viz.* "The Turk has overrun a great part of the Morea (formerly Peloponnesus, a peninsula at the South West of Greece) so that nothing now hinders his going into Italy, which he speedily intends, on the account of which His Holiness has sent to the Emperor importuning his aid, who with the Czar of Muscovy promised to assist in person with an army of 200,000 men. (Sir, is not Babylonia going to fall?) They have had a new fellow chosen at Cambridge. June 1 was hanged a negro

man for burglary at Boston. June 13 a discontented woman hanged herself at Charlestown."

From the same gentleman I received the master's questions and the bachelor's theses, two or three of which I will inscribe. (1) *Omnis disciplina theoria & praxi consistit.* (2) *Methodus in artibus tradendis est arbitraria.* (3) *Probabile est hujus mundi systema per accessum solis peruiturum.* How do ye like 'em?

As to domestic affairs, please be informed that July 18, Mr. Moss, Hemingway, and Noyes went to consecrate your chapel at the North Village. Also this day five persons were wounded badly (tho' not mortally) by several causes, carts running over 3, one knocked down with a yoke, and one by a bad fall. This town hath given 8 acres of land hard joining to the town plot, for the use of the College, if it comes here. Considerable of money is subscribed also. Mr. Elmer has fell out grievously with his parish; he'll be gone suddenly. Heu! Ha! Ha! He!

And Sir, before I conclude I would lay one thing before you, namely: I desire that there may be again a commerce of letters between us constantly, and I purpose to write chiefly concerning theology, but I would settle my mind in philosophy in general and logic in particular (as for physics I don't expect to be settled in that) and so discourse thereon in one or two letters if you please.

The village think it long 'till you visit 'em, and truly I must plead on their behalf, for an excuse of the former *lapis*. Seeing it was not wilful I wish you would favor the cause.

No more at present, but my salutations to your honored ancestors, I am

Sir,

Your humble servant and faithful friend

Dan'l. Brown

From N. Haven

August 3, 1716.

TO MR. DANIEL BROWN, A. B. & S. M., AT NEW HAVEN

AUG. 27, 1716.

Dear Friend:

Being under obligation to take all opportunity to express my engaged respect and intimate love to you from your repeated kindness unto me, I now send you greeting—

And therefore *Ad Rem*

As to everything else I think we were well enough agreed except in that of history. Your arguments here offered I have endeavored to answer face to face, but I will here add some small matters thereunto. You argue that there is not difference enough in the object to make them distinct sciences, that the subject of history being matter of fact is not difference enough. I make two or three queries: (1) Whether there is not as much difference between the subject of natural history and philosophy as between creation and providence (setting due bounds I mean) and whether creation, I mean the fabric of the creature and the actions of it as they are subject to the great governor of the world, be not as really as much different as the composition or fabric or modification of the matter of a creature and its extension, length, breadth, etc.? (2) Whether or no according to your own treatment of history being subservient handmaid, etc. you would jumble history among your policy or natural philosophy? Or whether you would not look on them as distinct, and if so whether 'tis not more convenient to refer each history to a different head of science? (3) Whether history is more of a handmaid etc. than logic to mathematics and physics or mathematics is to physics? *Scientiæ se mutuo ad servant posterior prioris utiur opere.* These considerations and the like seem to me demonstrative, but *cuique suum pulchrum & sufficiat.* I speak for myself, as Mr. J. Locke says.

Sir, I may inform you that since I was with you I have read a treatise of one Mr. J. Clark, professor of philosophy in Amsterdam, written in Latin, printed in 1704, dedicated to Mr. J. Locke, in four volumes — Logic, Ontology, Pneumatic, and Physic. I read only the first part of Logic and Ontology. It is the same that Mr. Brightland was taken out of, word for word, but something larger. This is the ingenuous hand Brightland tells of in Preface, but he treats of all the heads of syllogism in the fourth part, but says he does it only *veterum legendi gratia*. But the thing I chiefly aim at in his Ontology of *Unum verum bonum*, cause, effect, subject, adjunct, whole, part, essence, existence, duration, distinction, order, *prius, posterius*, power, art, necessity contingency, possible, impossible, perfect, imperfect, finite, and infinite, etc. And the distribution of *ens* in *genera & species*, which now taken into hand by a new philosopher seem very pretty, which heads also Mr. Locke treats on occasionally *sparsim*. And upon reading of them I am induced to two things. (1) To think that it is becoming to have a

general science antecedent to mathematics etc. which is ontology, treating of the more abstract ideas of all *entia* such as the heads before mentioned. Which will give an account of those universal axioms and definitions etc., such as *Ex nihilo nihil fit*; *Nil dat aliquid quod non habet*; etc., which are of universal use in all real sciences and fall not properly under any one of them. But perhaps you will say they belong to logic, therefore the second thing that I've thought is that they do not. For logic is the art of thinking. Now these things do no more conduce to explain our manner of thinking than any other example as *homo* or *lapis*. But you'll say cause and effect etc. all allow to be of logical consideration; I answer no more than only as examples of relative ideas and therefore no more belongs there than *corpus* and *spiritus* do to substances, or *albor*, *nigror*, etc. to modes, as they are logically handled, and from hence I conclude that them relative ideas ought not to be handled in logic no more than particular substances and modes, and that neither particular substances nor modes nor relative ideas ought to be handled in logic only *exempli gratia*. From whence I conclude that there ought to be this particular distinct science of ontology general to all particular real sciences. This is the same which the old philosophers call metaphysic. Of this mind also was the great and noble Lord Bacon, and he called it *Philosophia prima*. I shall give you an epitome of my scheme!

So having no more present thoughts I shall here conclude only offering these two or three questions. (1) *Aue dantur idea innatae seu connatae*? And since you spoke of divinity — (2) whether you think that men shall arise with the same bodies numerically as they had at death? If so, on which Scriptures you build this opinion. (3) Whether illumination of the mind (I mean spiritual) is not sufficient for conversion? Thus, Sir, hoping to see you next week after next at Commencement, and if not to receive an answer (tho' I depend much on seeing of you) I bid you till then farewell,

Subscribing myself your faithful friend and servant

S. Johnson

From my study at Guilford August 27, 1716.

Philosophy is the University of all learning called science or art according to its twofold consideration:

All sciences or arts are:

Semiotical, or Rational, of:

Ideas, the immediate signs or images of things;
hence Logic.

or Words, the mediate images;
hence Grammar:

here Rhetoric and Poetry.

Real, and that in general Ontology; in particular respecting:

Creature, the works of

Creation, under the modes of

Quantity, hence Mathematics, as arithmetic,
geometry, astronomy, geography, optics, music.

Quality, hence Physic, as pneumatics, astrology,
stoichology, meteorology, metalology, lith-
ology, botanic, surgery, anatomy, medi-
cine, chemistry.

Providence, hence History, which is either
civil, ecclesiastical, natural, etc.

Creator; Theology either

Natural, where

Cognoscenda

Agenda — by man

Segregate — Ethic

Congregate

Economic

Politic

or

Revealed, where

Credenda

Agenda — by man

Segregate — Ethic

Congregate

Economics

Politics

PART IV

THE REVISED ENCYCLOPEDIA

SOME / GENERAL / SPECULATIONS / BEING / AN IN-
TRODUCTION / UNTO / *SOPHIA*, or / PHILOSOPHY / BY /
SAMUEL JOHNSON A. B. / GUILFORD, MAY AND JUNE /
ANNO DOMINI 1716 /

THESE ARE / *THE* / SYSTEM OF / *TRAVAILS* / OF
THE / HUMANE / INTELLECT / IN THE / *MICROCOSM* /
& IN THE / *MACROCOSM* / SOPHIO-TECHNOLOGY /

The
Travails
of the
Intellect
in the
Microcosm
and
Macrocosm

[illegible]

TWO PAGES OF THE REVISED ENCYCLOPEDIA

Two pages reproduced from the first version in English of Samuel Johnson's *Encyclopædia*, or *Introduction to Philosophy*. The work, after revision, was published in 1731 in a London magazine called the *Republic of Letters* and was enlarged and republished in 1744 as *the new and valuable* *Encyclopædia*.

A DIVISION OF THE SCIENCES

<i>SOPHIA</i> or Philosophy: the University of Learning — All sciences or arts are	SEMIOTICAL or Rational, as	{ I. LOGIC II. GRAMMAR, to which Rhetoric and Poetry, etc.
	REAL which in general is Ontology of Abstract Ideas. In particular of	{ CREATURE, as III. Physic, to which Mathematics, etc. CREATOR and our Duty, as IV. Theology, to which all the Practices

I. The soul of man being of a spiritual, immaterial and immortal nature, endowed with those noble powers of reflection, intellection and election (as it were) resembling the glorious Trinity of persons in the unity of the sacred godhead of Jehovah, יְהוָה, its thrice blessed maker, is therefore a being of very great dignity, and consequently the endowments and acquirements thereof are indeed exceeding valuable and hence all the noble perfections and virtues thereof, whether they are intellectual or moral, are well worth laboring, studying, and taking utmost pains for.

II. Though indeed since our lapsed state we are destitute of that acumen, vivacity and vigor of our powers, which in our primitive state we were possessed with, yet since there are some relics and remains of them (tho' indeed so much disordered and foiled with sensuality, that we can but guess what our state of innocency and perfection was) it seems highly worth our labor to do what in us lies to raise and recover both our intellective and elective powers as high as may be towards their primitive and native glory, beauty, perspicuity and regularity, that we may not be altogether unanswerable unto the chief end and happiness of our being.

III. And still it is natural unto the soul of man, being of a think-

ing and conscious disposition and continually in a thinking motion, always to be a hovering to and fro, and grasping this or that or the other object, wherein to find some satisfaction and contentment, that it may make it its *summum bonum* and the center of its rest, which still it in vain seeks for in any created beings, its fellow creatures, and therefore it misses and falls short of its aim, till by hovering and groping about, it at length light on that soul satisfying Being its Maker, in the knowledge of, and being like unto whom (which is its truth and goodness) it attains unto that which in vain is to be sought for elsewhere — namely unspeakable peace, rest, acquiescence, satisfaction and contentment. For truth and goodness do immediately satisfy the cravings of a rational and immortal spirit.

IV. But alas! How many are there which not only miss of this Being in their quest after happiness, but being overwhelmed, immersed and drowned in and overpowered by sensuality, do at length professedly or at least practically deny the existence of this their Maker, which indeed as it is highly irreligious so it is most grossly irrational. For when I walk up and down the universe beholding the admirable structure thereof and the vast variety of beings affording most delicious objects for the feasting of my senses, more particularly viewing the glorious expanse, the canopy of heaven over my head, adorned with those bright torches or luminaries, those glittering spangles, the stars; the sun rejoicing to run his race carrying so many thousands of blessings to so many thousands of people on the surface of the earth, and then turning mine eye downward upon the wonderful variety of beings both inanimate and animate here below in the earth, the admirable curiosity of the products of nature, all marching in so exact order, as though they were all guided by innate reason, then sitting down and contemplating on the wonderful displays of wisdom in them, as being all guided and governed and ordered in such a manner, as seeming to evidence and evince that there is design in it, yea both in their production and government, all things seeming evidently to point and aim at some certain ends which I am sure they cannot be conscious to themselves, all conspiring to praise their great Creator and Governor — more especially and finally contemplating on myself and with myself the more noble rank of beings mankind, and what wonderful, astonishing and amazing wisdom and power is displayed

in them both in body and soul, as in his body being a microcosm, a compound of the whole macrocosm, of most wonderful structure, harmony, beauty, symmetry, and proportion, and then in his soul, which is a spiritual being, the one resembling the inferior and visible, the other the superior and invisible world, I say upon the result of all these and the like considerations I must confess I am amazed that the being of Him that made these things should be with any rational creature matter of question, regarding also that those very persons themselves, as well as others, have so great evidences of this truth within their own breasts, as one would think should be sufficient to storm all those their preposterous and precarious reasonings out of doors.

V. But to make this a little more plain and set it in a better light:

(1) I think I have no ground for the least suspicion whether the ideas set before my mind are images of things real without me yea or no — for that I myself am, I am certain, for *qui cogitat et dubitat est*, and I have as little reason to question or suspect the being of any thing else as of myself.

(2) I have no less evidence and discovery of the mutability of the creatures than I have of their being, for sense assures us that everything is daily, hourly, and every moment changing and altering.

(3) Mutability necessarily supposes and infers time, beginning, continuance and end, for we see daily that in that the creatures are mutable they have a beginning, continue a while in being and then cease.

(4) That each and all of the creatures are mutable and temporal infers and evidences that they are not and consequently that the world is not eternal for, for time and eternity to consist in the same subject, looks very inconsistent; in regard that there must have been an infinite number of successions antecedent to those that are present, and there are also an infinite number yet future and so two infinities, which is absurd; in regard also that no histories give us any account of above 5 or 6000 years, which they would otherwise have done.

(5) That the world is not eternal does infer that it had a beginning, there was a duration before that of the world, for to think that the world (as Aristotle thought) did from all eternity necessarily stream forth and emanate from God as light does from the

sum would necessitate the world which is a creature to sustain an attribute which is only appropriated to its creator.

(6) That the world had a beginning supposes that it had a cause, or else it gave being to itself, and so acted before it had a being, which is most notorious absurd, for of nothing nothing of itself can arise. Or else the world (as Epicurus imagined) came by chance or a fortuitous concourse of atoms, which is as irrational to suppose as if a printer should cast his letters up into the air, and they should chance to fall down in so exact order that we should read a fair and legible poem.

(7) Since the world had a cause, who must this cause be? It will be granted that he has as excellent and noble properties as any of the effects thereof are endowed with, for it is most certain that the cause can give nothing which itself has not, it can't bestow what it has not to bestow, though indeed it mayn't bestow all that it has to bestow and it may bestow more on one effect than another.

(8) The most noble and excellent properties of any created being, the effects of this cause, will be granted to be understanding and will, these therefore are most eminently residing in him, who is the cause of all things, which also is evident from the wonderful display of wisdom in the curious frame and contexture of the fabric of the world both in whole and in its parts, which necessarily renders its maker a cause by counsel.

(9) But there must be many far more noble and excellent properties in this cause than there are in any of the creatures, his effects, as for instance a power of drawing things out of nothing or making things to exist which were not before, which this cause both has and can do, and no created being is capable of, and that both for want of sufficient understanding and power.

(10) To be able to draw and bring out of nothing and to make it in such a most curious and beautiful manner as the world is made argues infinite understanding and power, even such whereof we can conceive no bounds nor limits, wherewith this glorious cause of all things is endowed, which noble and divine properties of infinite and unlimited wisdom and power which we find thus residing in the cause are such as can consist with none but a deity and are sufficient to denominate him God, who sustains them.

VI. From all which it must be concluded that the being and existence of a God, the being of beings, must no longer stand under

suspense of judgment, but judgment must be passed and determination made on this wise, namely,

That all beings presenting themselves to our senses, and whereof we have the ideas or images set before our minds, did proceed from a cause, even a glorious cause, even from that being of beings, that first, last and best of all beings, even the Lord יתה who is the first cause and last end of things, who has created and given being to all things, does preserve uphold and continue them in being, does govern, guide and direct them to their own proper and immediate ends and in conclusion His own glory. — Of all which, if the light of human reason discovered nothing, we might be most certain from the oracles of God which are of most incontestable authority, wherein they are most clearly and plainly revealed. And the reason why I have brought in this demonstration of the being of a God is because it is the very foundation of all our wisdom, without which our learning seems but a very groundless, useless and insipid thing.

Which done I will proceed —

VII. This omniscient and omnipotent, thrice-glorious creator of all things, who is אלהים God, blessed forever; having by the word of His power according to His most perfect idea or platform, even His own infinite wisdom or knowledge, both produced the creatures out of nothing and embellished them with the glorious displays of His own most adorable perfections; adorned them with most illustrious beauty, beautified them with most harmonious order and symmetry, having printed them exactly according to His idea (for the creatures are indeed nothing else but God's words in print, or the substantial echo of that productive *Fiat*) He set man as a universal Lord over the works of His hands and made him the sovereign monarch (under Himself) of this inferior creation, that he might beholding the glorious beams of His infinite wisdom, power, contemplating on the wonderful displays of the divine perfections in the creation, return the glory of all back again unto Himself. "For God does" (as a great author* observes) "after the innocent and sweet play of children who hide themselves that they may be found out, hide His wisdom in His works that [He] may be found out, and of His indulgence to the

* Lord Verulam.

soul of mankind, He has chosen it to be His play-fellow in that game," alluding to Prov. XXV, 2.

VIII. That therefore man might thus be and do (besides that glorious, harmonious and beautiful structure of his body, which tho' it was so nobly and curiously framed as both to show the wisdom of the architect and to heighten the dignity of the creature, yet notwithstanding compared with the soul is but as the cabinet is to the jewel or the shell to the kernel and beyond comparison ignoble) I say besides this God had furnished him with an intelligent or rational soul or mind which being possessed with such noble qualifications enabling of it so to do, it does as a mirror or a glass receive the ideas or images of the rays of the glorious wisdom and other of the adorable perfections of God in His works and word, even all things that are knowable of the creature and creator — as do those noble creatures the angels, his fellow-rationals, whose knowledge is the same in kind with that of man's and differs only in degree, for that they are of a more noble order than him. Now these images or ideas in the glass of the rational intellect, whether human or angelic, may be called learning. If in the angelic, may be called *angelical learning*, but if in the human mind, *human learning*, and the body of human learning we call *SOPHIA* or *PHILOSOPHY*. [Greek and Hebrew synonyms for philosophy.]

IX. *Sophia* or philo-sophy then, as I here understand it, is an universal and complete treatise, system or compend, of all learning, mental or intellectual acquirements or ideas, whether human or divine, natural or revealed as they are both speculative and practical. As thus man being a rational creature and having a rational eye to behold the creatures with and a rational ear to receive whatsoever God should reveal unto him, he does thereby acquire knowledge, images or ideas of them; which we call learning. This is man's rational acquirement, and being a rational agent he is to act and manage his affairs according to what he has learned, to practice according to his knowledge. Man the *microcosm*, or *little world*, should know what he can and improve what he knows or has learned from the *macrocosm*, or *great world*, and since being rational he is capable of moral actions, of glorifying his maker consciously in conformity to a rational moral law and standing in such awful relation of a creature to a creator, which will challenge

it, it thence follows that he ought to know what he can and practice what he knows of *moral duty*.

X. But since I have taken leave to us the word *idea* (tho' the doctrine of it belong to logic, and it may seem a digression) yet for the sake of the use of it, since it may be very serviceable as being very suitable to express our learning the image or conception of the mind by, and that it may not be obscure I shall here define it. *Idea* is the image or thought of any thing immediately set before the mind or more properly here — *idea* is the intelligence that the mind has of any thing coming within the reach of it. The image in the glass of the intellect, and if it consist of parts or plurality, it may be defined a lively sculpture or portraiture of the thing whereof it is the image in the mind, or it may be termed an intellectual fabric, and the several parts thereof so many simple intellectual materials. Now then to apply this digression to its use, philosophy is the vast system or complexion of all ideas whatsoever, all mental acquirements and indeed 'tis the university of the mind, or one great idea comprehending of all things that are knowable and all particular ideas are the parts thereof, contained therein. Hence though philosophy has been used as exclusive of divinity yet here I comprehend it.

XI. Now *learning*, *philosophy* or *sapience*, this system of ideas may be considered *theoretically* as being the object of our contemplation or *practically* as being the rule of actions, accordingly it is wont to be diversely named, for considered as theoretical it may be called science, only denoting learning to be the object of the mind's contemplation or speculation as scientific. But considered as practical it may be termed art, denoting learning to be the rule teaching or regulating of practice, for as learning does delight the mind when contemplating on it, so it attains not its ultimate end except it does as occasion serves direct and regulate him in acting and practising of it. (Dr. Wm. Ames.) And tho' some sciences are more theoretical than others are yet every science has something practical.

XII. Here it mayn't be useless to show how knowledge may be said to be practical and how to teach and regulate practice, and that it does inasmuch as it represents to the agent the thing to be done and how it is to be done and consequently it regulates him in doing of it. If I know exactly how it is to be done, I am taught

to do it. For by representing how the thing is to be done, it represents the action to be exercised in doing of it and consequently teaches and regulates the agent in acting. And the action regulated by knowledge is called *eupraxy*, and the thing performed by this regular action is called the *euprattome*.

XIII. Now this system or compend of *learning, philosophy* or *sapience*, whether it be called in general, science or art, whether considered as the subject of contemplation or as the rule of actions, is the same and consists of various parts. All sciences or arts are either *semiotical* as conversant about signs or *real* as conversant about things. The first of an universal use and the second sort of more particular use, for all that can come within the reach of human understanding are either signs or images of things in general; or the things themselves in particular. The first of these teach and instruct us in getting and communicating of knowledge and the other teach us the knowledge of things knowable; the first are of use both in themselves and in the others, and the latter only of use in themselves, the former on all, the latter only on some occasions.

XIV. Sciences are semiotical or real. *Semiotical* which also may be called rational sciences or arts are the doctrines of, and are conversant about signs or images, whereby things are known and communicated, immediately of knowing and communicating, which images are more immediately or mediately the images or signs of things. The first being *ideas*, the second *words*. Ideas being properly the signs or images of ideas or thoughts whereby they are communicated unto others; of the first, logic; of the second, grammar.

XV. Logic is the science or art of thinking or reasoning of the mind or the understanding. Logic does both instruct and direct a man in the exercise of his reason, it is therefore the knowledge and rule of the various intellectual powers and actions. The subject of logic is the mind or the rational intellect or understanding. The object of it are the powers or faculties of the intellect, namely perception, in the simple apprehension, judgment and reasoning all exercised immediately upon ideas, and mediately on the things and ultimately the whole end and design of it is to lead the understanding unto its center of rest, which is truth.

XVI. Grammar is the science or art of speaking, that is of expressing or of communicating of our thoughts to others by signs

or words, th means of conveying them. Or, grammar is the art of expressing our thoughts to others by speaking or writing in words and sentences. Words are therefore signs or images of thoughts as thoughts are of things. The elements of grammar consist in letters, syllables, words and sentences, on which the whole is employed and tho' this art is the first in order of instruction, being *Scientiarum Janitrix* because it is needful to have recourse to dead languages for our other learning and in regard also that it is most consistent with the abilities of youth to learn languages their memories being then more apt for sounds, therefore grammar is taught first: yet indeed naturally logic goes before it in order.

XVII. Now since there are two sorts or rather modes of speech, namely prose and meter, however grammar is used in the making of both of them as they are speech, yet the diversity between them hath occasioned two appendages of grammar, namely rhetoric and poetry, and the former of use in the latter. Rhetoric prescribes rules for the adorning and sweetening of speech in both prose and meter, thereby adapting them to persuasion by exalting the imagination. Poetry prescribes rules for the due composition of words and sentences in meter in general and directions for the making of the several sorts of poems in particular, and diversifying them according to their several subjects; many of which are a sort of fictitious history, and some of them poetical representations of true things, clothing them in poetical dress.

XVIII. Thus much for the semiotical or the rational sciences of knowing and communicating. Now follow the real, of things in particular. Real sciences are the knowledge of things, namely all real beings whatsoever, which come within the reach and cognizance of the human intellect as far as we can attain to the knowledge of them, both creature and creator, and our duty by the light of both natural reason and of divine revelation, comprehending even all real beings without the mind.

XIX. But here, before we proceed to the distribution, we must constitute a general science, even as trees they don't branch out from the roots but grow up some first with a stump or trunk before they branch out with limbs and boughs. Even so here before we proceed to branch out the real sciences we must constitute a general science wherein they may all center, and the reason of it is this, namely because that there are certain properties which are common to all beings and therefore will not fall under any particular sci-

ence such as unity, verity, bonity, essence, existence, cause, effect, subject, adjunct, whole and part, etc. and multitudes besides (whereof see Mr. J. Clarke *Ontol.*). The science relating to these we call, as he, ontology, or as some others metaphysic, which we define: a science of the abstract ideas or general properties or affections of beings and the distribution of them into their kinds wherein according to their several proper places are delivered such common maxims or axioms as are of use in all particular sciences such as *Causa est prior effecto, Totum est majus qualibet partibus.*

XX. Having thus constituted a general science wherein is contained all those common properties of beings, which fall under no particular science and those common axioms which are of use in all particular real sciences, now in particular all the real knowledge which we can attain unto may be reduced to two heads according to their objects, namely the creature or creator, and the duty which we owe to Him. For there is no other real object of our knowledge. This therefore seems to me to be the first and most natural distribution of the real sciences.

XXI. First then we are to take a view of the creatures, since they are the *speculum* wherein we may behold something of the creator since God has given us some demonstration of His being and perfections in His works. Whence we may learn much of our duty, and all the creatures present themselves to our view under the modes of quantity and quality, which modes contain in general all that can be known of the creatures, whence there are two modes. Sciences respecting the creatures or the works of God, namely mathematic and physie. Mathematic respecting the quantity, number, figure or magnitude, and then physie respecting the quality or nature, the natural qualities of beings, tho' indeed they are very much conjoined in their use and mutual subserviency, especially the natures of things, as to their knowledge depend very much on mathematical principles, in the solution of all their phenomena, to these may be referred all sciences respecting the creature.

XXII. Mathematic is in general the science or art of computing, that is of numbering of discreet and measuring continued quantity, sometimes called *mathesis*. By discreet quantity is understood number and by continued quantity magnitude. Now therefore all the mathematics are concerned in either numbering or measuring or

both numbering and measuring any thing numerable or measurable.

XXIII. Hence mathematics are either pure or mixed. The pure are such as are conversant only with quantity in general abstracted from the thing, such are arithmetic, the art of numbering in general, to which belongs the art of algebra, and geometry the art of measuring in general. But the mixed mathematics are such as respect quantity in special concrete with particular things, these are called sometimes physico-mathematics, derived from arithmetic and geometry applied to either bodies as to the heavens whence astronomy, the art of measuring the bodies and motions etc. in the heavens and to the earth whence geography the art of measuring this earth, and navigation, the art of measuring the sea in the use whereof there are two globes, the celestial and terrestrial, telescopes and many other instruments, or else applied to qualities of bodies as in particular to light and color, hence optics or perspective, the art of seeing, and to sounds hence music the art of singing, and 'tis observable I think that all the particular mathematical arts may be referred to some or other of these and every particular art has its particular instruments.

XXIV. Physic is in general the science or art of searching after and discovering the nature of things, *scil.* of all created substances, and to this the mathematics is greatly subservient and useful, for the phenomena of nature are many of them best solved by mathematical principles. Now as this science comprehends the natures of the university of all created substances, spirits as well as bodies, and the qualities, powers and affections of them both, there are therefore many particular sciences comprehended under it, namely, in particular

XXV. (1) The heavens, angels and human souls being above the sphere of matter and motion present themselves to be the subject of the science metaphysics or pneumatics, etc.

(2) The starry heavens and their power and influences for the subject of astrology.

(3) The elements for the subject of stoichology.

(4) Meteors, the first of compound or mixed bodies, for the subject of meteorology.

(5) Stones for the subject of lithology.

(6) Metals for the subject of metallurgy.

(7) All sorts of plants being the first sort of animate bodies being endowed with a vegetable soul are the subject of botanics.

(8) Beasts and men the second sort of animates endowed with a sensitive soul are the subject of anatomy, of dissection, cyrurgery, of the cure of wounds and medicine, of the cure or healing of diseases incident to the body, and lastly chemistry, the art of resolving things into their principles is practiced on all natural bodies in which there are sundry instruments used besides which of great use are telescopes, microscopes, thermometers, and pumps and many others. (Of which is natural history)

XXVI. Thus much for the sciences respecting the creatures; now follow those that respect the creator and our duty to him which in general is called theology. Theology is the science or art of living by knowing, believing and obeying of God, acknowledging the being and glorious attributes or perfections of God with our duty as flowing therefrom enjoining outward and inward sincerity and engagedness in the practice thereof, thereby through the glorious mediation of a Savior and the application thereof by the Holy Spirit, leading mankind unto true happiness and felicity in the enjoyment of Himself.

XXVII. Theology is either natural or revealed. The natural theology is gathered out of the great volume or book of God's works by the mere light of natural reason in most evident demonstration of the being and attributes or perfections of God and our duty. This is by some called religion of the end proposing what man was to know and do in a state of innocency and perfection. This consists of two parts or members namely the *cognoscenda* and *agenda*.

XXVIII. The *cognoscenda* are the being and attributes or perfections of God and his works in creating, preserving and governing the world in the several parts and to the utmost extent thereof, all considered relating to God and a future state of rewards and punishments. The *agenda* contain whatsoever is by man to be done or practiced to God's glory and the public and private good of mankind. By man I say either as single or segregate or congregate. The *agenda* of man single or segregate is ethic or morality, the art of governing himself, his passions, teaching all the duties of the moral law, the first and second table. To this belongs what is called personal history. The *agenda* of man congregate or in society

are diversified according to the societies as family, state and church and are economics, politics, and ecclesiastics. Economics are the *agenda* in the government of families to which belongs histories of families; politics of the government of commonwealths, to which belongs political history, and ecclesiastics of the government of churches, to which belongs church history.

XXIX. Revealed theology is gathered out of the volume or book of God's word. Tho' indeed many things therein revealed might have been known by the light of nature yet the revelation of them is a further confirmation. But there are many which could no other ways have been known but by revelation; the revelation whereof was occasioned by and adapted to our fallen state. The design whereof is to discover unto us the way and means whereby we having offended God, may be reconciled to Him. This therefore is called the religion of the means, the Christian religion.

XXX. This also consists of two parts, the pillars, — *credenda*, and *agenda*. The *credenda* are all the articles of our creed, especially those relating to the mediation of Christ. The *agenda* are all those Christian duties to be done by man segregate as Christian morality, and congregate in Christian families, commonwealths and churches as such, hence are Christian economics, politics and ecclesiastics to which belong their several histories. In all which revealed divinity nor any part of it is looked on as a distinct thing from natural but only as additional to it. And thus we have given a general view of, running through the whole circle of, our sciences or arts, the university of our learning.

Finitum Octobris 15, die

Anno Domini 1716

Eo ipso die quo viginti annos habui. Paterno domo.

THE SUBJECTS OF COMMONPLACES ¹

1. Philosophia in genere.
2. Philosophia nova praeestat veteri.
3. Intellectus actus sunt logica dirigendi.
4. Ideae simplices sunt omnis cognitionis materia.

¹ The following notes and comments were apparently added later. [The Editors.]

5. De variis assensus gradibus.
6. De methodo inquisitionis.
7. Sol est centrum mundi.
8. Varia naturae phaenomena mechanicis principiis optime servantur.
9. Spiritus rationales sunt substantiae immateriales.

READER

Men's works have faults since Adam first offended
And those in this by thee let be amended.

Natus fui Octobris 15, 1696.

Hanc encyclop. feci editionem primam, secundam, et tertiam
Anno D. 1713; quartam 1714; hanc quintam 1715 ab initio;
aetatis 17, 18, 19, et 20.

PART V

LOGIC

LOGIC

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- Cap. II. Of simple and complex ideas.
- Cap. III. Of modes, substances and relations.
- Cap. IV. Of ideas clear and obscure, real and fantastic, adequate and inadequate, right and wrong.
- Cap. V. Of judgment and various sorts of propositions, simple and compound, universal, particular and singular.
- Cap. VI. Of truth and falsehood and of propositions evident and doubtful, and of knowledge, opinion and faith.
- Cap. VII. Of reason in general and of syllogism.
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- Cap. IX. The method of resolution and composition.
- Cap. X. The Socratic method of disputation.

An. 1720.

CHAPTER I: Of Logic in General

1. Logic is the science or art of thinking or meditation. The subject of logic is the mind or human understanding; the object of it are the powers or the operations thereof whereof it is the rule or directory. The end and design of it is to direct, instruct and regulate those its intellectual actions or operations and thereby to lead the understanding unto its center of rest which is at last truth. So that it is the whole idea of the rational intellect instructing and directing of man in the right exercise of his reason. The rule of his intellectual actions.

2. When we come to reflect on ourselves and take a serious view and critical survey of our intellectual powers and actions we find nothing more obvious than that they are exceeding prone to error and very apt to be depressed under the slavery of prejudice and to be sadly beclouded with obscurity, confusion to the great disadvantage of our understandings. Such is that sad and direful shock which the fall has given to human nature, such is the depravity of our reason's being brought under the prevalency and government of sense.

3. It is therefore an inquiry well worth our utmost pursuit how we shall redress those disorders and recover our minds unto a regular and rational way of thinking and adjust our thoughts unto those exact rules whereby these defects of our erroneous minds may be happily removed and they brought under the government of rational dictates; and to establish such rules and laws of thinking as may be of service to regulate our faculties in the pursuit of truth and preserve them from running into and embracing falsehood.

4. Truth therefore being the native glory of our minds and the proper and genuine satisfaction of our intellect and the happiness and complacency of our reason, to which therefore as rational creatures ought all our aims to drive and all our reasonings tend, and falsehood offering a sort of violence to our powers, I shall therefore propose this as the grand and important design and bus-

iness of logic to present the mind with such rules and to bring it under the government of such laws as will be serviceable to direct us in the happy pursuit and attainment of truth and preserve us from falling into falsehood.

5. Now this being the proposed design of logic it must be pursued by inquiring into the several acts of our understanding and observing where the errors of them are and where they are observed, to fix such rules as will assist us to avoid them. My method then shall consist in giving a plain and historical account of our several intellectual powers and prescribing rules for their direction everywhere according as they shall be found needful and wherever the erroneous bias and tendency of our minds requireth any.

6. And I think that upon a narrow search and critical scrutiny if we curiously reflect upon and attend what passes in our minds we shall find that all our intellectual powers may be referred to these three, *scil.*: *apprehension*, *judgment* and *reason*. For the general act of intellection may be termed perception whereby our minds are at any time possessed with the knowledge of the truth; and whatsoever falls within the notice of our minds we are said to understand or perceive it and the several acts of our understandings are variously diversified according to the various modification of our perception.

7. We might here profitably inquire (were it within our province) into the origin of this perception and the nature of that substance which is the principle of this sprightly and wonderful action; indeed it is a most obstruse and intricate inquiry and the most we can determine about it is what it is not, for what it is in its own essence and how it perceives we cannot clearly conceive. But so much we may determine, *viz.*, that it must be ascribed to it a more sublime, exalted and noble original than such gross materials as we converse with in this material world, since it is the principle of such noble and sublime actions and that whereby we have all that advantage and dominion which we have over this sensible part of the creation.

8. But whatever is the principle of these actions our business at present is only with the direction of them, and, as I was observing, the perception of our minds is various according to the various modifications thereof. Sometimes we perceive and take notice only of one object at once being singly represented to our understanding.

This is called simple apprehension. Sometimes we perceive the relation between two objects laid together ; this is called judgment. And lastly sometimes we perceive the relation between three objects or between two by the modification of a third and this we call reason. Thus I make the three general distinctions of our faculties.

9. And consequently apprehension is the perception of one single thing at once and the consideration of it by itself entirely. And the form of this simple apprehension is *idea*, that image or thought of any thing immediately set before the mind. And then judgment is the perception of the agreement or disagreement between any two ideas, which if it be expressed in words is called a proposition and reason is the inquiry the mind makes after the truth or falsehood of any proposition by the intervention and modification of an intermediate idea. To which we must adapt a suitable method.

10. These three, therefore, we shall pursue in their order and endeavor to explain what they are and thereby to set the mind before itself and prescribe rules to them severally. We have said that *idea* is the form of apprehension and therefore is the immediate object of the mind when it thinks; we shall therefore first inquire by what means these ideas were conveyed into and presented before the mind and assert that all ideas come into the mind either by sensation or reflection.

11. By sensation I understand that notice the mind takes of the objects without it by the intervention of the five senses, those inlets of ideas, the eyes, ears, nose, palate and indeed all parts of the body. The mind being thus cased up in the body has notice of things without it only these five ways and hence was any one born being destitute of any one sense his mind could be never possessed of any of those ideas which men that have that sense furnish their minds with. Thus by our eyes we have the ideas of all sorts of colors, by the ears we have ideas of all sorts of sounds, by the nose all sorts of odors, and by the palate all sorts of taste and lastly through any part of the body by the touch all the various sorts of tactile qualities.

12. And it may be here observed that it is by these sensible qualities variously affecting our senses and through them variously insinuating themselves into the mind that our minds are first put into action, for though they act freely enough when once they have these materials to work upon yet till they are some measure stored and furnished with the characters of these sensible qualities with

these first materials of thinking about which they are employed, we cannot conceive of any action of them at all.

13. By reflection I understand that notice which the mind takes of its own operations, for we have this advantage above the other species of sensitive beings that we cannot only as well as they see and hear, smell taste and touch, but we can reflect on these actions and take notice of these operations, yea we can reflect on our own reflections so as to spin out one reflection upon another time out of mind. We can take notice how our *inls* are particularly affected upon the perception of any object, and be conscious to ourselves that we have known or done anything and all the circumstances of it. Hereby we have the ideas of thinking, perceiving, apprehending, knowing, reasoning, loving, hating, hoping, fearing, willing, and willing choosing and refusing, etc. And these two, sensation and reflection, are the origin of all our ideas and there are no ideas how remote soever from them but what may be by them easily accounted for and referred to them as may further appear by what follows.

CHAPTER II

1. All the ideas that our minds are by these two sources possessed with are either simple or complex. Simple ideas are all those uncompounded perceptions which by sensation and reflection our minds have, in which we can discover no parts or plurality such as color, sounds, tactile qualities, the simple acts of our minds, etc., the *primordia* of our knowledge. We don't here understand these qualities as they are inherent in the body which hath parts, but as they are merely sensations considered in themselves unmodified.

2. Now all these simple ideas which our minds are stored with are such as come into them either by one sense, as light, color, sounds, odors, tastes, and some tactile qualities, which all are so many powers in bodies variously to affect our senses rather than real qualities; or by more senses than one as extension, figure, motion and rest, which we perceive by sight and touch. Or by reflection only; so are all the particular acts of our minds of perception and volition and the various passions. Or lastly by all ways of sensation and reflection as the ideas of pleasure and pain, power, existence and unity. And these are the chief heads to which all the vast store of our simple ideas may be referred.

3. Complex ideas are such as consist of a combination of various

simple idea in the mind and which if the mind reflects on it may evidently discern distinct parts in them, as an angel, man, stone, virtue, centaur, etc. And there are some of these which the mind receives, complex as they are, without attending to any operation of its own in combining the parts and simples of them and others which are the effects of its own voluntary operations, and we shall have opportunity to take notice of the great variety of them in the sequel when we consider the sorts of them.

4. But before we are particular upon the sorts of complex ideas it will be convenient to give some general account of sundry of the mind's operations upon its ideas and which will give some light to what will follow. For after our reception of any idea into the mind by sensation, if we turn our thought inwards and reflect, we may observe that the soul has a power to continue the idea for a while under its view and this may be called retention. Again it has a power whereby after the disappearing of the idea it can recollect and call it to mind again. Now the capacity of the mind to do this is its memory and its actual doing it is its remembrance, which differs from the first apprehension of the idea only in this, that the mind now perceives it with a consciousness of having perceived it before. And then the mind having revived its former perception by recollecting its ideas it has a power to contemplate them or meditate upon them a shorter or longer time as it pleaseth.

5. And in contemplating its ideas sometimes the mind only just attends to its ideas without any very strong application, and this is called its attention, again at other times it applies itself with very great strength and vigor to the consideration of them even so as to be deaf to all the solicitations of sense and this is called intention or study. And when the mind is thus intent upon its ideas, it has a power whereby it can add many simple or complex ideas together, or having any complex idea it can subtract from it what part or parts it pleases and so increase or diminish it and make it bigger or less. Again it can alter the situation of its parts by transposing them and modify them according to its pleasure. In short the power of the mind upon its simple ideas is much the same as a man's power is upon matter, for though we can't create the least particular or atom yet we can modify it how we please in many cases.

6. Moreover the mind has not only a power of discerning the differences of particular or individual ideas, but it can consider

various numbers of individuals, what they have that is proper and peculiar to themselves, as John, Thomas, William, etc., and what simple ideas there are in common among them and separate them by abstraction and combine them under some general name that shall comprehend multitudes of particulars under it and make complex ideas at its pleasure by combining various simples, as man, animal, wisdom, temperance, justice, etc.

7. And then finally sometimes we may observe that remissness in our minds that they will suffer a long train of ideas pass through them without taking any great matter of notice of any connection between them and this the French call *reverie* and that we can form to ourselves what exotic notions we please that have nothing in nature which answers them, as a centaur or any other monstrous shape, and this is the mere work of the imagination. And in dreaming ideas seem to jostle together many times without any design of the mind at all or very little, by which odd fancies arise in it which had no resemblance to anything that ever was or will be.

8. These are some of the modes of the mind's operations upon single ideas which may be of use in treating on the various sorts of them afterwards, for according to the different application and exercise of the thoughts the mind is furnished with different sorts of ideas. But however various these and the like powers and operations of the mind are, yet they are still confined within the compass of those simple ideas of sensation and reflection. It has no more any power to create any new ideas than it has to create any new matter, and the actions of the mind are as various as modifications of these materials of our ideas can be and they, if we a little pursue them in our thoughts, will amount to almost an infinite variety.

CHAPTER III

1. Complex ideas are of three sorts, namely, modes, substances or relations; a little on each of these. Modes are complex ideas which are considered as dependencies on, or affections of substances, as triangle, love, justice, etc. Modes are either simple or mixed; simple are such as contain a combination of various simple ideas of the same kind, as the number ten, which consists of units, and a foot of inches, etc. Such are the modes of number, extension, solidity, motion, space, duration and thinking, etc., all whose parts are only various repetitions of the same simple idea.

2. Mixed modes which consist of several combinations of simple ideas of different kinds, as justice, murder, a lie, and all virtues and vices and the like, which have nowhere any steady existence but are combined together by the mind under certain words used to express them and consequently the distinction of those names conveys to us such ideas, which is the way whereby we sometimes get these ideas and sometimes by experience, observation and invention, and they are many times the work of the mind forming to itself what it pleases.

3. Substances are things subsisting by themselves and the substrata to various powers, properties or accidents. And our idea of a substance consists of a combination of various simple ideas representing those powers or accidents considered within relation to some certain unknown subject or support in which they inhere and are combined, as the sun, a man, an angel, etc., every one of which are entire beings by themselves consisting of some unknown subject with its various properties.

4. There are two distinct sorts of substances, namely, body and spirit. Bodies consist of solid, extended, coherent parts, capable of motion and thereby of variously affecting our senses, and the chief ideas whereof the idea of body consists are those of passive powers. On the other hand spirits are substances that are endowed with the powers of thinking, willing, choosing, loving, hating, etc.—the like acts of our minds. So that the chief ideas whereof our idea of spirits consists are those of active powers and indeed our ideas of substances chiefly consist of powers.

5. Furthermore we have collective ideas of substances which consist of an aggregation of various individuals of the same or diverse kinds, such as the ideas of a flock, an army, a constellation, the world, and the like.

6. Relations are the various respects or habitudes which one thing has to another, and the mind gets its ideas of these relations by its comparing one thing with another. When we consider any idea by itself without taking notice of those simple ideas in which its relations to another consist we then look on it as absolute; but when we reflect on some certain simple ideas in which its relation to another is founded under that notion we call it relative; thus Solomon while we consider him by himself as a man so and so endowed we have an absolute idea but when we consider him as related to David as a son, or to Rehoboam as a father, we have a

relative idea and by means of those simple ideas in which their relation consists it is that one relative idea brings the others to mind.

7. All those terms which when predicated of a thing imply its relation to something else are called relatives, as father, son, husband, wife, brother, sister, bigger, less, etc. Some more express and some more obscure, and indeed every idea we can think of does include in it a relation to some other, in so much that the consideration of it will excite in our minds the consideration of something else, thus creator and creature are universal relations, and every idea may be considered under multitudes of relations to some others, by means of which relations it is generally that our thoughts are carried from one object to another. This is very observable in causality, time, place, etc., some whereof are natural, some moral, some instituted and the like.

8. Now although the relations of ideas one to another are infinite and numberless, yet they may most or all of them be referred to those various heads of abstracted ideas and modes of *Ens* which are treated of in metaphysics; such are cause, effect, whole, part, subject, adjunct, identity, diversity, equality, inequality, similitude, dissimilitude and the like, which should be treated of in logic for they seem to be of logical consideration, being of use in thinking and reasoning.

CHAPTER IV

1. Furthermore there are other distinctions of ideas proper here to be considered as that some are clear and distinct, others obscure and confused. Ideas are then said to be clear when the mind has a full and evident perception of them, and distinct when the mind by that perception plainly discerns and distinguishes between them. Thus simple ideas are clear when they are such as the objects of them did or might in a well-ordered sensation or perception present them, and complex ideas are then clear when their simples are clear and the number and order of them determined and certain, as a triangle. The contrary to this is obscurity and confusion.

2. Indeed the obscurity and confusion of our ideas is many times in relation to the names whereby they are expressed, especially in complex ideas when they are made up of too few simple ideas or the number and order of them is unsettled and undetermined, by means of which it comes to pass that one idea is con-

founded with another and therefore in this case we should when we suspect confusion in any idea examine what other idea it is in danger of being confounded with and very carefully fix and determine the bounds of them.

3. Again some of our ideas are real others fantastical. Those that are real have a foundation in nature and a conformity with the real being and existence of things as their archetypes; fantastical ideas on the other hand are mere chimeras, have not any foundation in nature and are only the work of the imagination. Of the first sort are all simple ideas in the reception of which the mind is wholly passive. But when the mind in combining the simple ideas has no regard to anything really existing without it whatever it then forms is fantastical, as a centaur, and the like, whether it be in modes or substances.

4. Of those ideas that are real some of them are adequate and others are inadequate. An adequate idea is a perfect representation of the object which is its archetype when they are completely correspondent to each other and of equal extent. Whereas on the contrary an inadequate idea is but a partial and incomplete representation of its object. Accordingly all simple ideas are adequate, for since they are themselves uncompounded our simple apprehensions of them are of equal extent with them. So also are complex ideas of modes, especially those that are the voluntary construction of the mind, as justice, triangle, etc. But complex ideas of substances are all inadequate for the mind can never conceive that its apprehensions are of equal extent with those subjects. Relations again are adequate as well as modes.

5. Finally our real ideas are either right or wrong according as they agree or disagree with the things themselves which they are taken to represent, even as pictures are true or false representations of their originals. Of these likewise our simple ideas are all true representations of their objects and consequently right. So likewise are complex ideas of modes and relations for the most part. But those of substances are many times false and therefore wrong especially when taken to represent the unknown essences of things or to be in any measure adequate to them, for it is but a very little way that our minds can penetrate into them. And thus much for perception or the first act of the mind with its various modes and objects. The next is judgment, wherein the former considerations will be of use and which therefore next lies before us.

CHAPTER V

1. Judgment then (as we here take it) is the perception of the agreement or disagreement of any two or more ideas. Thus when I affirm that the whole is equal to all the parts it contains or that a square is not a circle my so judging in those cases implies no more than my perceiving the relation of equality or agreement between the ideas of the whole and its parts, and that there is none between the ideas of a square and a circle. So that this act of the mind evermore consists in its considering its ideas in reference one to another.

2. This is judgment as it is in the mind which when it is expressed in words is called a proposition wherein there are ever these three things to be considered, *viz.*, (1) the subject, which expresseth the idea on which the judgment is passed, as, the sun; (2) the predicate or attribute which expresseth the idea which is judged to agree or disagree with the subject, as, bright, round, square, etc.; and (3) the copula or affirmation by which when it is alone we join the subject and predicate together affirmatively, as, the sun is bright, or is round, or when the negative particle is added they are put together negatively, as, the sun is not square. This is sometimes called composition and division.

3. These terms, the subject and attribute, are not always expressed but sometimes they are only implied in the copula, as, the sun shines, it rains, etc., and wishes, prayers, etc., interrogations and the like contain in them implicit propositions as when I ask, does it rain? etc., it is, *g. d.*, I ask whether it rains.

4. Now propositions are by logicians variously distributed. I shall omit many divisions which are of little or no consequence. But it may be proper in the first place to observe that some are simple and others compound. A simple proposition is one wherein as there is but one single act of the judgment so there is but one attribute affirmed or denied to have relation to but one subject; as, God is good; Solomon was wise; the sun is the center of the world; all the lines drawn from the center of a circle to the circumference are equal; the moon is not so big as the sun; etc.

5. A compound proposition consists of and is capable of being resolved into sundry simple propositions and consequently expresseth several acts of the mind, there being therein more than one subject or attribute or both; as, the sun is great, round and bright; Peter and Paul were apostles; the sun and fixed stars are

of the same nature and use; God who is good cannot be delighted in the misery of his creatures. In all which and all other compound propositions it is observable that various subjects or attributes or propositions are connected to one another among themselves and joined together in affirmation by the copula expressive of it.

6. Sometimes the subjects, attributes or propositions are joined together among themselves by copulative particles; as, the sun and stars are bright; the earth is dense and round; etc. Sometimes by connective particles; as, if a man be virtuous he is to be praised; because the sun is above the horizon it is day; etc. Sometimes by discrepative particles; as, although Paul was an apostle yet he was a tent-maker. And sometimes by disjunctive particles; as, this time is either day or night, etc. And a great variety of them might be reckoned up which may commonly be met with in authors.

7. Again propositions according to the extent of the subject of them are either singular, particular or universal. An universal proposition is that wherein the subject is taken in its longest extent; as, man is rational. But generally it is expressed with a note of universality; as, all or none; as, all men are sinners; all circles contain an equal number of degrees; no man is perfect; etc. And these notes import that the attribute agrees or disagrees with all the individuals contained under the subject.

8. A particular proposition is that wherein the subject is contracted by the note of particularity (as *some*) implying that the attribute is restrained to only a certain number of the individuals contained under the subject; as, some men are learned; etc. But a singular proposition has for its subject an individual idea; as, Solomon was wise. Sometimes expressed with a note of singularity; as, this man is rich, etc. And they have this affinity with universals that in both the subject is taken in its largest extent.

CHAPTER VI

1. But omitting other divisions I proceed to consider the truth and falsehood of propositions, for all propositions are true or false.

2. Those propositions are true which are agreeable to the nature of things, and those are false which are not. Truth then is when the mind joins together such ideas as have a relation to each other and separates such as have none. Falsehood directly contrary. As, the whole is equal to all its parts; twice five is ten; twice three are

not equal to seven; etc., are true propositions. Twice four are equal to nine or are not equal to eight, are false. And the only criterion or mark whereby we know which propositions are true and which not is evidence.

3. Now although all propositions are in their own natures true or false, yet to us the truth or falsehood of them does not always appear and for this reason propositions are lastly divided into such as are either evident and certain or probable and doubtful. Propositions are then evident and certain when we have so clear a perception of the agreement or disagreement of the ideas which are the subject and attribute thereof as to exclude all manner of doubt, and in which therefore the mind can entirely acquiesce and take up fully satisfied. Such are these: the whole is bigger than any of its parts; twice five = ten; the three angles of a right-lined triangle are equal to two right ones; God is good; etc.

4. The mind is ever possessed of this evidence one of these three ways, *viz.*, by intuition, demonstration, or sense, so that certainty or knowledge is either intuitive, demonstrative, or sensitive. And at the same time of but a short extent, there being but few objects that we can either of these three ways arrive at certainty about.

5. We have then intuitive knowledge when we perceive the agreement or disagreement of the ideas one with another immediately by comparing one with the other, as between the whole and its parts, etc.

6. We have then demonstrative knowledge when we evidently discover the agreement or disagreement of any ideas by the mediation of one or more intermediate ones, as between the three angles of a triangle and two right ones, etc. But here the relation between every intermediate step must evidently appear or the conclusion will fail of its evidence.

7. We have sensitive knowledge from the testimony of our senses concerning the existence of things without us which are the objects of them as of a man, tree, etc. But then the senses must be rightly disposed and rightly applied. Thus we have the knowledge of our own existence by intuition, of the existence of God by demonstration and of the existence of other things by our senses.

8. Propositions are then probable when we have such reasons and proofs for them as make the agreement or disagreement in some measure apparent and likely, though not (as in knowledge) so as to

exclude all possibility of doubt, as are various philosophical hypotheses; as that each fixed star should have its chorus of planets, or that any of the planets should be inhabited, etc.; for in such cases although the thing may appear to be not so to different persons yet none can have assurance *pro* or *con*.

9. This probability is stronger or weaker according to the weight of those reasons on which it is built, somethings being capable of more and fuller examination and consequently the propositions concerning them being capable of better and stronger reasons for the confirmation of them than others. So that there must unavoidably arise a great deal of diversity both from the nature of the things themselves and from the conditions, tempers, capacity and circumstances of the persons that pass their judgments concerning them.

10. When therefore such things occur to our consideration as at first are doubtful to us and concerning which we have a suspicion until we have had sufficient time and means of examination and after all to proportion the degree of our persuasions to the force of those reasons which our best inquiry suggests to us without too much haste and precipitancy.

11. Our judgment of propositions examined by ourselves or advanced by others is called assent which admits of various degrees according to the nature of the propositions on which it terminates, as it is very obvious to observe if we reflect on our minds in the judgments we pass for they sometimes yield a full and complete, other times a more infirm and doubtful assent to them. Thus our assent to evident propositions is called science which excludes all doubt and our assent to probable propositions is called opinion which is stronger or weaker according to the probability to which the assent is yielded. To which also we may add faith which is our assent to propositions advanced by another in matters where-with we are not any other way acquainted, which is divine if the testimony be God's and human if man's.

12. But we may observe a very manifest difference between the sense of our minds with respect to those propositions which we advance by our own observation, inquiry or experience, and those which are advanced to our minds by the mediation of others. In the one our intelligence is our own whereas in the other it is but borrowed. In the first sort science and opinion are concerned, in the latter faith, and the degrees of assent are various in each.

13. (1) If in matters of our own acquaintance we have a clear and evident perception which compels our assent whether by sense, intuition or demonstration we have then science. (2) If in matters of our own acquaintance we are not able to discover that evidence but yet they carry with them the face of truth we have then opinion in which the strength or weakness of our assent is thus diversified. (1) If we have made repeated experiments, have good instruments, have used sufficient deliberation and the hypotheses we advance have any very great suitableness and correspondency to the appearances of things, and various conditions and circumstances conspire to the confirmation of it, I say in these cases our assent is very strong, and is but a step short of science. (2) But if the subject be not capable of examination, or if we have not had opportunity for it, so that any or all of the forementioned conditions are wanting, then in proportion thereto our assent is weaker and is in various degrees from a preponderating persuasion to real doubt and scruple. The former of these is applicable to the hypothesis of the solar system and the like, the latter to questions about spirits, the inhabitants of planets, and many hypotheses advanced about the production of sensible qualities, and the like.

14. But then as to the other sort, *viz.*, that intelligence which we have from testimony; (1) if the testimony be God's and assent thereto is divine faith, in which we have an assurance equal to science, since we know that God can neither deceive nor be deceived, we can't therefore so much as doubt or hesitate; but then we must be sure that it be a divine revelation, and that we rightly understand it. (2) If this testimony be human our assent to it is human faith in which there are various degrees. (i) If there be several honest, skillful witnesses all concurring in a testimony to any matter of fact, such a testimony is of great weight, almost equal to a demonstration in persuading our assent, especially if the thing appear likely and probable in its own nature or nothing contradictory, as that there was such a man as Julius Caesar or Alexander which gained various victories, etc.; or that there is such a place as London, Rome, etc. (ii) But so far forth as any or all of the conditions are wanting in the witnesses or in the thing to which their testimony relates, so far forth it falls short of that credibility more or less in various degrees down to incredibility itself; of this sort are several old stories of little credit.

15. But whether it be in matters of science or opinion on the

one hand or of faith divine or human on the other, such rules as these may be of good service for the regulating of our assent.

(1) That things are then evident and we are to rest fully satisfied when they command our assent and we can no longer withhold it.

(2) That such things as are equally true may not in their own nature be capable of the same degree of evidence or proof.

(3) That things of several kinds may admit of several sorts of proofs which may all be good in their kinds.

(4) That men ought to rest satisfied in the best evidence or proofs for anything which that kind of thing are capable of.

(5) That the mind may give a firm assent to some things, where yet the proofs for them are not such but that they may be otherwise, and be justified in so doing.

(6) It is sufficient in matters of faith that they be propounded so as to make them appear highly probable or credible, so as a teachable man may safely assent to them and be justified in so doing.

(7) Where there is no such certainty as to take away all doubt there an impartial judgment must incline to the greater probability.

(8) Where two things appear equally probable or credible there we should incline to the safest and most advantageous.

CHAPTER VII

1. Thus much for judgment. Now since there are some propositions evident, some more others less probable or credible than others, and since it is our aim in this art to lead us to the knowledge of truth and to increase our understandings by raising us from a weaker to a stronger probability and if possible to certainty, and since reason is that power whereby we enlarge our knowledge and regulate our assent, we shall therefore lastly treat concerning that, offering such rules and instruments for its assistance as may be of service to it in the exercise thereof for the attainment of those ends.

2. Reason then is that power or faculty of the mind whereby it enquires and searches after unknown truth by the intervention of intermediate ideas and also proves it to others when discovered. The exercise of it consists in such a perception of the agreement

or disagreement of the intermediate idea with the subject and attribute of the question as shall discover or draw in view their agreement or disagreement among themselves; as, if the question were whether charity were praiseworthy, in order to discover the agreement between the idea of charity and praise we may use the intermediate idea of virtue, which having a relation to both those extremes discovers their agreement among themselves, for first it may be asserted that virtue is laudable and secondly that charity is a virtue and thence we conclude that charity is laudable. Since whatsoever things agree in a third agree among themselves.

3. So that the exercise of reason consists: 1st, in finding out the intermediate idea which having a relation to the extremes or each part of the question may discover their agreement or disagreement among themselves; and 2dly, in so comparing this idea with each part of the question or contested propositions as to make a conclusion accordingly. The first is called sagacity, the second illation.

4. As to the former, *viz.*, invention, for the exercising of that logicians have ranged things under several heads, as predicaments and predicables and relations of cause and effect, subject, adjunct, whole and parts, etc., which may be commonly met with in their books and I shall not particularly treat of them. And though they may in some cases be of service, yet in general this may be sufficient to admonish, *viz.*, that this exercise of this faculty consists in a diligent and attentive survey of the subject or matter of examination and consideration of the various respects and relations it bears to other things, and this the mind generally does without having recourse to the several topics of invention commonly prescribed, though so doing may many times serve to fix an airy, unconstant and unsteady mind.

5. As to the latter, *viz.*, comparing the intermediate idea with the question in order to make a right conclusion, for the exercise of that Aristotle and the logicians which follow him have prescribed and used syllogisms in mode and figure which, although a very curious contrivance, yet they have been too much doted on and abused to sophistication. However syllogisms are of very good service in schools for managing of regular disputations and therefore ought to be well studied. But since they are so fully treated of in our common books I shall here say very little of them.

6. Syllogizing in general consists in comparing the intermediate

idea or argument first with the predicate of the question or major term and secondly with the subject of it or minor term, and then making the conclusion according as it was found to agree or disagree with them. If it was found to agree with both, the conclusion is affirmative, if with but one then it is negative. The first proposition is called the major and the second the minor, from the denomination of the terms, and the third the conclusion; as, *Omne justum est utile; Omne honestum est justum; Ergo, omne honestum est utile. Justum* being the middle term.

7. Now according as this middle term is disposed so are the modes. If it precedes in the major and follows affirmed in the minor proposition, it is then the first mode, as,

*Omnis virtus est laudanda;
Charitas est virtus;
Ergo, Charitas est laudanda.*

And if the middle term follows in both the major and minor propositions, one of them and the conclusion being always negative, it is the second mode; as,

*Lapis non est homo;
Petrus est homo;
Ergo, Petrus non est lapis.*

And if the middle term precedes in both the major and minor propositions, the minor being always affirmative and the conclusion particular, it is the third mode; as,

*Petrus non est doctus;
Petrus est homo;
Ergo, Aliquis homo non est doctus.*

Besides which there are also connex and disjunct syllogisms which may be reduced to them; as, *Si justitia est virtus, tum est laudanda, at ita, ergo etc.; Aut dies est aut nox, at non nox, ergo dies, etc.* But for the right understanding of mode and figure and those several characteristics whereby we may make a right judgment of syllogisms, the *Ars Cogitandi* is very accurate to which I refer, this being sufficient for my purpose, viz., only to give a general account of the exercise of our reason, for syllogisms are only those forms wherein this general exercise of our reason may be disposed.

CHAPTER VIII

1. Having considered the general nature of reason and the exercise of it in syllogisms I shall now consider the use of it and what may assist in the improvement of it. And here (1) I shall consider the impediments which hinder a just improvement and endeavor to remove them, and (2) I shall treat on method and (3) on disputation. Method being the improvement or use of reason in finding out truth and teaching it to others and disputation the use of it managing a controversy in common conversation with others.

2. Now for the first it is obvious that there are many impediments which stand in the way of just improvement and therefore they must first be removed, such are want of proofs, or want of ability, or will to use them, or wrong measures of probability, which everyone singly and much more any or all of them jointly prejudice the mind against truth and bear it down before them into error. These therefore I shall a little distinctly consider.

3. (1) One cause of error in making a judgment on anything is the want of such proofs on which it ought to be built, for such is the condition of the greatest part of mankind that they have not leisure for an attentive consideration of matters of controversy and therefore are under a necessity to abide under such persuasions as they are trained upon, without considering whether they have truth or falsehood on their side. Now as to such it is their unhappiness rather than their fault if they are in the wrong and in this case it is a mercy that those things that are necessary to their salvation are so much within the compass of what their leisure enables them to consider of.

4. (2) Another occasion of men's error is their want of ability or skill to use such evidences as they have. As there is nothing more observable than the mighty difference there is among the geniuses and capacities of men, so there are some, and that not a few, whose understandings are so feeble or their apprehensions are so dull that they are not able to enter into a thorough survey of matters, to discover the connection between principles and deductions made from them, especially if there is any considerable length of reasoning requisite in order to discover the truth. And of these the same may be said as of the former.

5. (3) A further occasion of men's error is their want of will to use such arguments as are within their power. A hot pursuit of

pleasure or business, laziness in general and a particular aversion to books and study, or perhaps a fear that a more careful examination of a matter would oblige them to part with some opinion or other in which their present interest is concerned or embrace one contrary to it, I say some or other of these things may prejudice and bias their wills against a faithful and impartial application of themselves to search after truth, and they remain contented in their present persuasions, whether right or wrong.

6. (4) And then lastly the wrong measures of probability are among the great occasions of men's errors in judgment. Such are (i) doubtful propositions taken for principles. It is no very easy thing to eradicate or even to suspect such principles as have taken root in our minds in our most tender years before we came to the exercise of our reason, they having grown up with our minds and thereby become as it were, connatural to them. But such however may chance to be false and when once admitted do unavoidably lead into error: thus, the principle of the infallibility of the Pope, etc., among the Romanists lays a foundation for their belief of the rest of their absurdities.

7. (ii) Received hypotheses are other measures of probability which extremely expose men to error; which is when men have embraced a particular scheme and set of thoughts and make them the measures whereby they judge of any proposition belonging to the schemes of others. And this many times occasions a seeming repugnancy between different sorts and parties where there is really none, perhaps because they only differ in their manner of expressing the same thing, or in the different definitions of their terms. This has happened in many controversies about predestination, perseverance, etc.

8. (iii) The passions are likewise to be reckoned among the causes of our errors, for we are very prone to judge things as we would have them and to oppose anything that crosseth us. So Felix bids St. Paul be gone when once his reasonings came across his lusts. Thus anger, self-love, fear, desire of glory, etc., prejudice the mind and when once any opinion is admitted by the choice of some passion we are apt to catch at every thing that makes for it as might be shown in many instances.

9. (iv) Finally the authority of others and especially such as we have a great value for may many times lead us into error. A great

veneration for them will dispose us to resign our minds and take what they say for true without examining it. Now though it becomes us to have a reverence for the judgments of the great and ancient and men of experience and especially in such things as we have not had opportunity to examine, yet we ought to endeavor to weigh well their reasons.

10. Since therefore there are so many and so powerful occasions of error we ought to bethink ourselves of them and to be aware of them and to maintain a jealousy over ourselves that we may not be involved in error by means of any of them and for our further fortification against it and for the preparing and disposing our minds for the reception of the truth we may observe these three rules.

11. (1) We should take care to possess our minds with the love of truth as such. Love is one of the most noble passions of the soul, which if thoroughly engaged will vigorously spur it on to enjoyment. Now therefore since truth is the proper object of the mind from whence all its genuine satisfaction is derived, what can we better love? Which if we sincerely do this love will mightily animate and engage us impartially to enquire and search after it. We should therefore love truth and hate falsehood and error.

12. (2) We should labor to purge and discharge our minds of all prejudices from whatsoever causes they are derived and on the contrary endeavor to gain that freedom and liberty of thought which may enable us to examine things impartially and embrace the truth whatsoever circumstances it is attended with. And (3) we must endeavor to preserve our minds calm and free from the perturbations of passion or whatever else, and to gain the command of our attention, so as to be able to apply our thoughts vigorously where and to whatever pleases. These rules if with care observed will well prepare us for the exercises of our reason to good advantage.

CHAPTER IX

1. Having given these general observations and rules I proceed in the second place to treat on the method or order wherein our thoughts may be conveniently ranged and disposed for the more happy arrival at the knowledge of the truth and more advantageous delivery of it to others. Method is that series or order of our thoughts wherein by a gradual progression from things more known

are these: (1) that the distribution entirely exhaust the whole thing distributed; (2) that the parts of the division be opposite one to another; (3) that one part be not so contained in another that the other can be predicated on it; (4) that in distributions we do as much as possible follow the nature of the thing.

9. Definition is either of the name or the thing. Definition of the name depends on our will entirely and is only the explaining or declaring in what sense or latitude we purpose to use such a name, which is by numbering up in order such simple ideas as we combine under it in which (1) we should go as little as possible from the common use of it, and (2) keep constant to our own definition in our use of it. The definition of the thing is the explication of the nature of it by the enumeration of its principal attributes or properties, or (if less accurate) by such as are more accidental to it, as, man is a rational, sentient living substance, etc. The rules of definition are: (1) that the definition be adequate to the thing defined; (2) that it be proper to it; and (3) that it be more clear and obvious than it. Now in abstract and clear ideas the definition of the name and the thing are coincident, and in this method we must observe: (1) never to use any word ambiguous or obscure without a definition, and (2) to make use of no words but such as are of a very known signification or have been already explained.

10. Axioms are propositions of so great perspicuity and clearness that as soon as ever we hear the words wherein they are expressed and understand them we perfectly know them and discern the evidence of them. These therefore are such as we know by intuition, as, the whole is bigger than its parts; nothing cannot produce something. These and the like have no need of demonstration, since no demonstration can be more evident than they are, and indeed they are not capable of any, being themselves principles and maxims from whence demonstrations begin. The rules for them are these, namely: (1) Whatever proposition relating to the matter under management which expresseth the immediate clear comparison of two ideas without the help of a third is to be admitted for an axiom; on the contrary (2) whatever proposition needs the intervention of a third idea for the evidencing of its truth must not be admitted for such.

11. Demonstration is the evidencing or clearing up and discovering the truth and certainty of any proposition whose evidence does not at first sight appear by the intervention of an intermediate

idea, and this is that wherein the act of reason itself is exercised. Demonstration is either *ὅτι* or that the thing is, or *διότι*, how it comes to be thus or so; by the one we prove a thing to be and by the other we show how or why it comes to be so; as, if I show that the three angles of a triangle are equal to two right angles, *viz.*, that the thing is fact, by one, and then give the reason of it by the other. And the rules of demonstration are these, *viz.*: (1) that we prove every step that has the least obscurity; and (2) in so doing, that we make use of nothing for a medium but what has the highest evidence as definitions or axioms or propositions already demonstrated, and (3) that these be so ordered in the use of them as that the conclusion may appear to be the plain and natural result of them laid together.

12. All these parts appear evidently in geometrical examples as may be observed throughout Euclid, etc. But we may give something like it in the fore-mentioned example inverted, supposing that we had by the fore-mentioned method found out the immortality of the soul and every proposition were evident or demonstrated, I say supposing this, then it might be delivered in the method of composition thus: (1) All intelligent or conscious substances are immaterial. (2) All things that are said to be immortal are irresolvable into pre-existent principles. (3) Whatsoever is immaterial does not consist of pre-existent principles, and therefore can't be resolved into any. (4) The soul of man is a conscious substance. Therefore (5) by these principles (if they be true) it is immortal. But the truth is this is but a faint example because the subject is not capable of strict demonstration.

CHAPTER X

1. Having thus considered reason in the general and the use of it in the method of searching and teaching the truth; I conclude with the method of disputation, which is called the Socratic method because it was his invention and practice and his followers', especially those that adhered to their master.

2. Though the syllogistic forms of mode and figure are best for the orderly and regular management of a disputation in a college when scholars dispute in their halls before their president or tutors, yet I conceive that they are of very little use elsewhere, and especially in conversation if any dispute happen, but this method seems

to things less known the mind is conducted to the knowledge of them and to the evidences of the truth; or as some, *Methodus est catena ratiocinationum inter se mutuo dependentium*.

2. Now the general rules of method are

(1) That we begin with things more simple and easy and dwell on them a while before we proceed to the more compound and difficult, for by these we are lead to them.

(2) That we preserve evidence in every step of our progression or that every proposition considered by itself be clear and evident.

(3) That the connection of the following proposition with the foregoing in every degree throughout the whole series be necessary and evident.

These rules are universally to be observed in each method.

3. Method is twofold, *viz.*, resolution and composition; by the former, truth is to be sought after and by the latter, it being discovered, is to be taught to others, though in some subjects the method of resolution is most convenient for teaching also; in each of which according to the foregoing rules every proposition and consequence must be carefully considered, examined and well proved before we proceed any further.

4. In the method of resolution we proceed from particulars to generals, wherein having laid down first of all some particular proposition we draw forth consequences successively one after another until by passing through diverse mediums by various argumentations, all having their mutual connection we at length arrive to the establishment of some general proposition, or at least if it be possible, to the discovery of some particular truth by probable hypotheses. This method can be nowhere so perfectly observed and exemplified as in algebraic resolutions, but may be likewise in some measure observed to good advantage in enquiries into nature especially if we take our rise from well managed experiments, from them forming hypotheses and carrying on a series of argumentations for the solution of the phenomena.

5. The rules of it are these: (1) First of all carefully consider and examine the state of the question, and observe well what the thing is which is sought for, being unknown. (2) Observe well also what that is which in the question is supposed to be known and begin on that and thence take the progress in the search for that

which is unknown. (3) Divide the difficulties under examination into as many parts and particulars as we can, for the whole is best examined in its parts, and as thorough knowledge of the particulars is requisite for the true understanding of the general. (4) Conduct our thoughts gradually and not too quick and precipitantly from things more simple and easy to things more compound and difficult, for it is a good rule: *soft and fair*. (5) And finally we should number our mediums and make our reviews exactly that nothing material be omitted and yet everything impertinent be rejected.

6. The most accurate examples of this method might be taken from the great instrument of analytical resolutions, algebra, which is indeed a most noble art. But there is something like it in this reasoning for the discovery of the soul's immortality: (1) The soul is an intelligent and conscious substance, (2) consciousness is repugnant to matter, therefore (3) the soul is immaterial. And (4) if it be immaterial it is indivisible, and (5) if it be indivisible it is incapable of dissolution, which is the same thing with immortality. Therefore the soul is immortal. Here we begin with particular propositions by way of enquiry every one of which is supposed to have several considerations on it for its proof before proceeding to the next.

7. On the contrary in the method of composition we are to begin with laying down several general either known or demonstrated propositions, such as definitions, axioms, or propositions already demonstrated, and all in the most clear and intelligible terms and then apply them to the particular case we are discoursing on for the introducing the conclusion. This method can scarce possibly be observed except in mathematical and moral subjects where there are clear and abstracted ideas. The geometricians especially have made great use of it in the delivery of their discoveries. Now the instruments and parts of this method being distributions, definitions, axioms, and demonstrations, I shall here give the rules of each of them.

8. Distribution is the division of a thing or subject of discourse into its various parts, either of any general idea into the particulars contained under it; as, animal into man and beast; or of a whole into its members; as, man into soul and body. And these parts whether species or members are sometimes distinguished by causes, effects, subjects or adjuncts, etc., for want of names to distinguish them one from another by, and the rules of distributio:

much better to answer the end, and especially if we meet with sophistical wranglers who make the victory and not the truth the end of their disputation.

3. The rules for our conduct in such an *extempore* disputation are these: (1) That we conduct ourselves as though we desire to learn something of him with whom we argue and show a candid and ingenuous spirit therein and indeed truth ought to be and is the aim of every honest man in disputation. (2) We should throughout the dispute be cautious that we admit of no false or obscure proposition, telling our adversary that we are willing to hear and receive the truth but must have good evidence or probability for it. (3) We should, therefore, if the person with whom we argue uses any obscure or ambiguous terms, modestly ask him to explain them, telling him that we are both in danger of error if we are lead on under ambiguous terms. (4) If we have got him to speak plainly and to discover what he means, we should then ask him questions on every part of the doctrine he advanceth and their consequences, not as reproaching him of ignorance but only as desirous of further information and sometimes similitudes may be proper here. (5) If a clear explication of a doctrine don't discover the truth or absurdity of it we may then ask him on what reasons or arguments he builds his opinion and in the examination of them we are to conduct ourselves according to the rules before mentioned. (6) Let our answer to his arguments be either by signifying a modest scrupling the truth or consequences of them or enquiring whether such or such absurdity wo'n't follow from them. An example very pertinent, see Plato's *Dialogues*, Mons. Le Clerck's *Logic*, Englished by Mr. Brightland. And I think if we dextrously attend these rules, he with whom we argue will either see the absurdity of his opinion, or if passion blind his eyes we may be excused from any further dispute, but if his doctrine prove to be right and his reasons convincing it is our duty as wise men freely to yield and acknowledge the truth.*

* Plato's *Dialogues* are with wonderful art and ingenuity contrived after this method and especially *Protagoras*. I read them in March 1721-22.

FINIS

PART VI

MISCELLANEOUS NOTES

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MUNDUS NOVUS.

A VISION OF A NEW WORLD.

At the Vernal Equinox in the year 1717.

Continued through the summer.

I. Remove the Ptolemaic. 1. It is impossible for matter to move so fast. 2. Those things that are possible are unaccountable. 3. This renders the creation very confused.

II. Prove the Copernican. 1. Hereby all the phenomena of nature may be easily accounted for, which no other way can. 2. They may be accounted for by one simple law of motion. 3. Because it renders the creation compendious and harmonious.

General Postulata

1. That hypothesis is to be most esteemed best which best accounts for the phenomena of nature.
2. God and nature do nothing in vain.
3. Vain is that done by more means which might be done by fewer.

MR. JOHN NORRIS' CLASSES OR DISTINCTIONS OF THOUGHT.

He distinguishes thought into several classes:

1. Thought is either formal or objective. The first is the act of thinking the second the *idea*.

Formal

2. It is either direct or reflex.
3. Active or passive thought.
4. The thought of perception or volition.

Objective

5. Simple or complex thought.
6. Clear or confused thought.
7. Abstract or concrete thought.
8. Pure or impure thought.

He distinguisheth between idea and sentiment, the first he supposes only to be those perceptions we have which are necessary and immutable, and by sentiment those sensible modifications of our own souls occasioned by the impression of bodies. His hypothesis is then that our minds have no ideas of their own but that they see all things in God. That we do by the perception of our mind think on God and eternal truths immediately and that the divine ideas are actually and immediately present to the view of our minds, so that whatever we think on and have presented to our minds it is *mediantibus ideis divinis*. They therefore (according to him) are the very self-same ideas we think by and whensoever by these divine ideas we think of any sensible thing, God causes that with the ideas, expressing only what is necessary and immutable in them, be conjoined the sentiments or such modifications as are excited upon the occasion of the sensible impressions of bodies without. This something ingenious but strange hypothesis.

THE DISTINCTIONS OF TRUTH. JULY 1, 1718.

Truth always consists in the agreement or conformity of anything with its standard. And this must be viewed (1) in the eternal mind which is truth itself and the standard of all truth. Truth therefore has its first origin and foundation in the divine ideas or the Omiforme Mind of the Eternal God. And hence those truths that are called eternal are archetypes, so called because they are founded in the eternal Mind. (2) In the creatures, which is called *Veritas Rei* which consists in their conformity with the ideas of God which are their archetypes. For God's eternal wisdom is the original standard into which all things are made and their truth consists in their agreement thereto. (3) In our minds, and this is called *Veritas Mentis*, which consists in the conformity of our minds with the things themselves, which as they are ectypes of the divine ideas, so this is an ectype of them, for our ideas and perceptions are so far forth true as they answer their patterns, that is, the things themselves whereof they are the images and representations. Logical truth. (4) In our speech, and this is called *Veritas Sermonis*, which consists in the conformity of our words and speech to our minds and sentiments, for words are the images of our ideas as they are of things and as they are of the divine ideas, being successive repre-

sentations of one another. Moral truth. So that all the truth in the world streams forth from the divine Mind which is the original fountain of light and verity, the true ideal world, the archetype and standard of truth and goodness wherever we behold the emanations of them.

MR. CROUSAZ DIVIDES LOGIC INTO FOUR PARTS, FOR IMPROVING EACH ACT OF THE MIND IN THINKING

1. Simple perceptions or of single objects, and considers
 1. The division of perception into sensations and ideas, and these into simple and compound.
 2. The division of the treatise of the first part, accordingly:
 1. The thinking faculties: (1) sense; (2) imagination; (3) understanding; (4) will, inclination, and passions; (5) attention; (6) memory. To all which he gives rules.
 2. The object: (1) substance, body, spirit; (2) modes or attributes; (3) relations: (a) to us; (b) of things among themselves: conformity, similitude, diversity, opposition, unity, multiplicity; subject, adjunct: whose parts: essence, existence, causes, effects, and the like metaphysical forms and affections.
 3. The manner of thinking of objects: clear, obscure, simple, compound, abstract, general and determinate ideas, and genus and species, etc. And total, partial, full, exact, imperfect, complete and incomplete.
2. Judgment, whereof propositions, affirmative, negative, true and false, certain, uncertain, and probable (whereof pyrrhonisme), of principles, prejudices, and other causes of false judgment, and of singular, universal and particular, and of compound and complex propositions.
3. Of reasoning, whereof stating questions, inventing arguments, topics, application of arguments, sophism, simple, compound and irregular syllogisms.
4. Method: whereof the means to approach, to complete knowledge; order of conducting our thoughts; of studying; teaching; and disputing; synthetic and analytic methods; definition; division; of continued discourses and dialogues.

THE BEST METHOD (TO ME) OF SCHOLARS' STUDIES WHILE AT THE COLLEGE.¹

1. Let them practice at the tongues the first winter and especially Hebrew which can't be perfected at the schools carrying on still the exercise of them all the while. In the spring let them begin logic, reciting first Ramus's and then after that two or three times over let them take a view of the grounds of grammar, rhetoric, and poetry, which may take up the first year and t' en
2. On the second year let them begin with Brightland's *Logic* and recite that and ontology. Ramus and Bargar, *dicius*(?) by turns till about March, April or May. Thereupon let them fix their thoughts by begining mathematics, besides vulgar arithmetic let them learn decimal fractions, the extractions of the roots and logarithms and the use of them in *Geodesia* and plane and perhaps spherical trigonometry. And henceforward let them study Euclid's *Elements* till they have a good view of them, but let this and the practice of what they have learned be but their diversion, and natural philosophy in all the parts of it their business to the end of that year and also
3. On the third year let them recite first some good system of physics and after them the theory and practice of astronomy, chronology, and dialling, so mixing their mathematics of all sorts with their physics as that they may both grow up in their minds together for the third year, and
4. In the beginning of the fourth year let them recite pneumatology and a system of ethics and then return again to and repeat their former studies and proceed in the second course as before, still carrying on the studies of Divinity on the last day of the week all the time.

SELECTIONS FROM A BOOK OF COLLECTIONS FROM AUTHORS.

Hooker's Ecclesiastical Polity. p. 127. B. 3. s. 1. Speaking of the visible Catholic church says: If men by external profession be visible Christians, then are they of that visible church of Christ; and Christians by external profession they are all, whose mark of recognizance hath in it all those things mentioned (viz. one Lord,

¹ Written by Johnson about 1720. [The Editors.]

one Faith, a one Baptism) yea though they be impious idolators, wicked heretics, persons excommunicable, yea and cast out for notorious improbity.

B. 3. s. 11. p. 141. The conclusion and substance of that book is: that so far forth as the church is the mystical body of Christ and his invisible spouse, it needeth no external polity, that every part of the divine law which toucheth faith and works of righteousness is alone sufficient for it in that respect; but as the church is a visible society and body politic, laws of polity it cannot want (i. e. be without). But II. as to those laws we must distinguish between matters of perpetual necessity to salvation, and matters of ecclesiastical polity, the one fully and plainly taught in Scripture, the other not necessary to be in such sort there prescribed; the one not capable of augmentation or diminution, the other apt to admit both. p. 152. The matters wherein church polity is conversant are the public religious duties of the church as the administration of the Word, sacraments, prayers, spiritual censures, and the like. To these the church standeth always bound. Laws of polity are laws which appoint in what manner these duties shall be performed. p. 154. Such laws must be made according to the general laws of nature and without contradiction to any positive law in Scripture. To laws thus made and received by a church, they that live in it must not think it indifferent to obey or not . . .

Hooker's four general postulates, by which he would form a judgment of ecclesiastical laws and ordinances, are these:

I. That in the external form of religion, such things as are apparently or can be sufficiently proved effectual and generally fit to set forward godliness, either as betokening the greatness of God's, or as beseeeming the dignity of religion, or as concurring with celestial impressions in the minds of men, may be reverently thought of; some few rare, casual, and tolerable, or otherwise curable inconveniences notwithstanding.

II. That in things the fitness whereof is not of itself apparent, nor easy to be made sufficiently apparent unto all, yet the judgment of antiquity concurring with that which is received may induce them to think it not unfit who are not able to allege any known weighty inconvenience which it hath, or to take any strong exception against it.

III. That where neither the evidences of any divine law, nor the

strength of any invincible argument otherwise found out by the light of reason, nor any notable public inconvenience doth make against that which our own laws ecclesiastical have, although but newly instituted, for the ordering of these affairs, the very authority of the church itself, at the least in such cases, may give so much credit to her own laws as to make their sentences touching fitness and conveniency weightier than any bare or naked conceit to the contrary; especially in them who can owe no less than childlike obedience unto her that hath more than motherly power. Prov. 6. 20. IV. That it may not seem hard if in cases of necessity, or for common utility's sake, certain profitable ordinances sometimes be released, rather than that all men, always, be strictly bound to the rigor thereof. Lib. 4, 5, 6, 7, 8, 9, 10.

Plato lived almost 400 years before Christ and taught philosophy just when prophesy ceased among the Jews. It is a saying of Plato, that if a man perfectly righteous should come upon earth, he would find so much opposition in the world, that he would be imprisoned, reviled, scourged, and in fine crucified. (as was Christ).

Plato 2 Alcibiades quotes an ancient author who made this prayer: Great God, give us the good things that are necessary for us, whether we ask them or not; and keep evil things from us, even when we ask them of thee. (very fine truth).

And speaking of the qualifications of him that prays acceptably, says: That nothing is so precious as wisdom and justice both in the sight of gods and men, and none are truly wise and just but those who both in their words and actions know how to acquit themselves of their duty both towards the gods and men. Mr. Dacier Plato. p. 249.

Plato in Phaedone says: That death is so far from being horrible to true philosophers, that it is their whole business to die, i. e. by disentangling themselves from their bodies. p. 90.

Plato in Phaedone says: For as much as the soul is immortal the only way to avoid evil and obtain salvation is to become good and wise, for it carries away nothing along with it but its good or bad actions and its virtues or vices, which are the cause of its eternal happiness or misery, commencing from the first minute of its arrival in the other world. Plato in Protagora wonderful.

The chief of Plato's doctrines were: (Mr. Dacier)

That there is one God, that we ought to love and serve him and to endeavor to resemble him in holiness and righteousness. That this God rewards humility and punishes pride.

That the true happiness of man consists in being united to God and his only misery in being separated from him.

That the soul is mere darkness unless it be illuminated by God; that men are incapable of praying well unless God teaches them that prayer which alone can be useful to them.

That there is nothing solid and substantial but piety, that this is the source of virtues and that it is the gift of God.

That it is better to die than to sin.

That we ought to be continually learning to die, and yet to endure life in obedience to God.

That it is a crime to hurt our enemies and to avenge ourselves for the injuries we have received.

That it is better to suffer wrong than to do it.

That God is the sole cause of good and cannot be the cause of evil, which always proceeds from our disobedience and the ill use we make of our liberty.

That self love produces that discord and division which reign among men, and is the cause of their sins; that the love of our neighbors which proceeds from the love of God as its principle, produces that sacred union which makes families, republics, and kingdoms happy.

That the world is nothing but corruption, that we ought to fly from it to join ourselves to God who alone is our health and life; and that while we live in this world we are surrounded by enemies, and have a continual combat to endure which requires on our part resistance without intermission; and that we cannot conquer unless God or his angels come in to our help.

That the Word, *Logos*, framed the world and rendered it visible, that the knowledge of that Word makes us live very happily here, and that wherby we obtain felicity after death.

That the soul is immortal, that the dead shall arise again, that there shall be a final judgment both of the righteous and the wicked, when men shall appear only with their virtues or vices which shall be . . .

Conformity between England and the foreign churches
in sundry respects. Dr. Wells.

1. All the churches of the Augsburg confessions have a subor-

dinating of pastors, and in all the Lutheran Reformation, and in Sweden and Denmark and Norway, as also in Hungary and Transylvania they have true bishops both name and thing, and they kneel at the sacrament and cross after baptism, wear the surplice and keep holy days, and use organs. The Synod of Dort acknowledges our bishops, and when the divine right of episcopacy was asserted they submitted.

2. And all the other parts of the Reformation have superintendents, even in all Calvin's Reformation, and look up those things disputed between the Church of England and Dissenters to be at least indifferent, and that therefore the Dissenters are guilty of schism in refusing obedience.

3. There is no reformed church whatsoever without a set of established liturgy.

THE COPY OF A LETTER I SENT TO MR. BRADFORD,
PRINTER AT N. YORK, AND WHICH WAS PUBLISHED
IN THE N. YORK GAZETTE ON MONDAY,
MARCH 17, 1728/9.

To the Publisher of the N. York Gazette.

Sir:—

Jovis omnia plena. Virg.

The author of *The Observations on Human Life* seems to have undertaken a great and good design, a better, sure there cannot be, than to deliver mankind from their follies, vices, delusions and fears; particularly we shall justly esteem him a benefactor to mankind if he proves successful in his endeavors to banish the many vulgar whims about apparitions and hobgoblins, and in correcting the received system of spirits, and in leading us into better notions of the invisible and intelligible world.

For my part I can't but be willing to contribute my mite towards this laudable design, and since it is one of the most unaccountable things in human life, that while people are so apt upon all occasions to fancy they see, and to be frightened at inferior and malignant spirits, they should at the same time lose sight of and neglect the great supreme and beneficent Spirit, who has made, pervades and presides over the universe, when (as this author justly observes, *He has set the surprising and uninvestigable phenomena of nature before our eyes, on purpose to raise our admiration of His power,*

and to excite our homage, and adoration, towards Him the great Author of all things. This therefore shall be the subject, upon which I would presume to entertain your readers.

Unaccountable, I say, it is, that rational creatures should have their eyes open upon this vast and stupendous fabric of heaven and earth, and (I don't say, not be convinced of the being, for that seems utterly impossible, but) not be struck with the strongest impressions, and most affecting, admiring, and adoring apprehensions of the Deity.

Say (as it is sometimes said in this case) that the frequency and perpetual presence of these objects to our minds, is the occasion of our being no more strongly affected by them; that hence it is (to use this author's instance) that we do not so much admire the sun, which we see every day, as a comet, which is rarely seen once in a great many years. And that we do not so clearly discern, and are not affected with so strong a sense of the power and presence of God in the constant and regular course of nature, as we should in extraordinary and miraculous interpositions. However this shows our great inattentiveness and want of reflection; for if we did but a little consider and reflect, our reason would soon convince us that God does as really and as powerfully exert and discover Himself in one as in the other.

If indeed these appearances were not so very many, so noble, august and magnificent, it were not so much to be wondered at that we are so stupid and so little affected by them. But when every thing that occurs to both our senses and thoughts, every thing that we see, hear, taste, smell, or feel, either from without or within, exhibits the clearest and most obvious, the strongest and most affecting indications of wisdom unsearchable, of power ineffable, and of goodness immense, how can it be that the minds of men are not continually fired with the deepest admiration and reverence, and enflamed with the highest love and devotion towards that mighty Being, who is perpetually presenting Himself to their view, in such great and noble productions on every hand of them, by whom they are environed on every side, and in whom they live, move and have their being.

Now therefore to affect our minds the more strongly with a sense of these things, let us in the first place suppose a poor peasant who had never seen anything greater or finer than a little mean thatched house or hut underground, should at once be translated out of his

despicable cottage, into one of the stateliest palaces of Europe, and there shown in such a magnificent building, the exquisite architecture, the fine statuary, the beautiful painting, the surprising clock-work, the curious water-works, and delightful gardening, and other the like noble productions of art; with what an ecstasy of rapture would he be surprised, amazed and astonished!

In like manner, in the case before us, let us imagine a man shut up in the dark from his youth till he comes to ripeness of understanding, or let us suppose him in a state of perfect manhood, first to enter into being (like Adam in Milton) and then on a day when the face of the world appears in the height of its verdure and beauty, to have all nature in a moment to open upon him, with all its glory; what a mighty beautiful scene, full of a boundless variety, in the midst of a most agreeable and pleasing uniformity at once entertains his ravished eye, and astonished mind! To use Milton's words,

..... About him round he sees
Hills, dales, and shady woods, and sunny plains,
And liquid lapse of murmuring streams, by these
Creatures that live and move and walk or fly,
Birds on the branches warbling, all things smile
With fragrance, and with joy his heart o'erflows;
Himself he then beholds, and limb by limb
Surveys, and sometimes walks, and sometimes runs
With supple joints, as lively vigor leads.

What can be imagined now the result of such a surprising and delightful prospect, but some such soliloquy as that divine poet puts into his mouth.

..... Thou glorious sun, fair light,
And thou enlightened earth so fresh and gay,
Ye hills and dales, ye rivers, woods and plains
And ye that live and move, fair creatures tell
Tell, if ye saw, how came I thus, how here?
Not of my self; by some Great Maker then,
In goodness, power and art pre-eminent;
Tell me how may I know Him, how adore
From whom I have that thus I live and move
And feel that I am happier than I know?

Thus he would be immediately struck with a mighty sense of some glorious being, who must be the allwise and almighty artificer that made him and everything else!

Let us now make this our own case, and awake out of our insensibility, as though we had but this moment first stepped into being, and imagine ourselves to begin the world anew, taking our first prospect of this noble and beautiful landscape of universal nature, with all her grandeur, and every one of us methinks must thus reason with himself, "I am encompassed here with a vast number and variety of curious and stately objects, a spacious earth, an ample sea, and immense heavens, and all these garnished with a boundless plenty of gaudy furniture; among all which I observe unity of design, exactness of order, beautiful harmony, proportion and fitness, of one thing to another, which certainly must be the effect of mighty power and wonderful art and contrivance; which necessarily infer the universal presence of a wisely-designing and all powerful Mind."

For in the next place, to be a little particular; if we essay to examine the make and texture of any of the bodies about us, though we are presently lost in impenetrable mysteries, yet the further we extend our search, the more we discern of the presence and agency of this almighty mind. If we take a body and break, or file, or any way dissolve it, we find it consists of a combination of numberless extremely fine and minute particles which strongly cleave together. But how? Not by any force of their own. If we take up a stone, and let it go, it immediately falls to the ground again, but why downwards, rather than upwards? It has no principle of activity in it or counsel to direct itself. Some invisible cause, there must therefore be, of this strong tendency of the parts of bodies one to another, and of the bodies themselves to the earth, visibly exerting itself in these effects.

This cause does not act mechanically, for all the laws of mechanism suppose it. It does not act on, nor according to, the surfaces of bodies, but penetrates their dimensions, and every where equally pervades all things. These effects, therefore, being immechanical, the cause of them must be immaterial; and there evidently appearing in them all a plain design and tendency towards some aim and end, the cause of them must always act by counsel; whenever therefore we see these and the like effects, even all the productions of

nature, we may be as evidently certain of the presence and agency of a most wise and powerful spiritual being, as we can of the presence of a man, when we hear him speak, and see him walk.

If we survey the curious structure and contrivance of the bodies of plants and animals, and especially of this wonderful machine which we carry about us, how can we fail of being smitten with astonishment at the power and art by which they were so fearfully and wonderfully made? For in all these productions, it is evident that the matter whereof they are made is merely inert and passive, and has not the least glimpses of any power to move itself. There must therefore be present an almighty being who has the power of beginning motion and in every instance not only first sets, but likewise still keeps, the wheels of nature a-going.

It is no less evident that matter is in fact wrought into a various multitude of most wisely contrived systems; but if it could not move itself, much less could it contrive and direct itself into such a variety of wonderful structures. There must therefore be everywhere present a superintending designing mind, an allwise contriver, as well as an almighty mover, who is the author of all that stupendous variety, that exquisite harmony, that exact and beautiful proportion and fitness of one thing to another, which so clearly shine forth among the vast numbers of all sorts of beings that are round about us.

If we now pass off from this our globe of earth, and take a survey of the boundless and unmeasurable heavens, what an innumerable multitude of stars are there, which doubtless are so many suns, to their several systems? Our sun, a prodigious and amazing globe of fire, 900,000 times as big as this globe of earth, is attended with a noble chorus of planets, each one of which (like this our earth, which is one of them) is unquestionably furnished with rational inhabitants, by the Great Author of all, to admire His works, enjoy His beneficence and adore His majesty. Now what a mighty idea does this system of the universe give us of the Deity!

For (as I argued before) these prodigious bulky globes (some of which are above an 100 times as big as our earth) are utterly inert, and could never have moved themselves. They must therefore have been at first put into motion by the almighty mover, exerting a prodigious force, and the *vis centripeta*, or tendency of these great bodies to the sun, by which (universally proportioned to the quantity of their matter, and the squares of their distances from

him) they . . . continually drawn from their rectilinear projectile motion, and retained in their orbits, going their perpetual rounds, can be ascribed to no mechanical cause, and therefore must be ascribed to the immediate agency of an almighty mind, powerfully pervading the universe, and continually exerting itself in the government and regulation of every system. And the wonderfully wise adjustment of these two motions, and the precise situation of every globe, so as to render it a proper mansion for inhabitants fitted to it, demonstrate that almighty cause to be infinitely wise and good.

And besides, since it is evident that the same boundless wisdom, power, and goodness, are every where alike exerted and displayed in every system of the stupendous universe, throughout all these immense spaces, and since nothing can act where it is not, we have hence an incontestable evidence of the universal presence, and surpassing inconceivable greatness of that glorious being, who must of necessity be the only one, universal cause of all these astonishing phenomena.

If now, lastly, we return home and look into our own minds, these wonderful thinking beings which we feel within us, in which we are conscious of the noble powers of perception, apprehending, judging, reasoning, knowing, and remembering, of liberty, willing, choosing, refusing, loving, hating, and acting, etc., we may from them discover and even feel the being, perfections, and presence of the divine nature. For since we and all other rational beings, are conscious that the exertion of these powers in us had a beginning; since nothing can begin to be and act without a cause; and since no cause can give what it has not, or produce an effect more noble than itself; it is hence evident both that these powers had a cause and likewise that the author of our beings and all our powers, must himself be possessed of them in the greatest perfection and independent of any other, and consequently must be a being of infinite perfection.

* [And since the objects of these powers of ours, the ideas in our minds, can be resemblances of nothing but of ideas existing in some other mind; and since there is nothing but some active being, that can produce these ideas in us; we are hence most certain of the constant presence and agency of an almighty and all-comprehend-

* Note: That what is between these brackets, is Dr. Berkeley's notion, but was not printed.

ing mind, who possesses the originals of our ideas, in the highest perfection, and continually exhibits to our minds all those ideas or resemblances of them, which are the objects on which our powers are perpetually exerted and employed.]

And as to the nature of these souls of ours, we may determine that seeing matter consists of multitudes of particles divisible, nay, actually divided each of which is a distinct and separate substance, and that it is capable of nothing but figure and motion, and what results therefrom; and seeing these noble powers have no connection with and cannot be dervied from matter howsoever figured, moved or modified, it therefore follows that our souls are of entirely another sort of substance, *toto coelo*, different from matter, and seeing they are immaterial they must be indiscernible and consequently immortal.

O happy day! when we shall be delivered from these gross, sickly, and unwieldy bodies, when we shall get at liberty from these prisons of flesh, and blood, and be furnished with pure, fine, and ethereal bodies, and with perfect, clear and exquisite senses and understandings, and when without let or hindrance, with the utmost freedom, vigor and agility, we shall, in company with other pure philosophical and devout spirits, be under advantage at pleasure to waft ourselves anywhere through the vast fields of ether and more nearly survey the mighty systems of the works of God. When we shall have nothing to interrupt our contemplation of those multitudes of most agreeable and delightful objects from which His immense wisdom, power, and goodness, will perpetually shine in, with the brightest lustre, upon our ravished minds, strongly including and engaging us to the reasonable service of acknowledging, loving, and adoring, that almighty, allwise, and beneficent author of all things, in the knowledge of, union with, and conformity to whom, consists our highest perfection and happiness.

I am, Sir,

&c.

P. C.

Feb. 25, 1728/9.

PART VII

THE PHILOSOPHICAL CORRESPONDENCE
BETWEEN
SAMUEL JOHNSON AND BISHOP GEORGE
BERKELEY

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TO THE REV'D DR. BERKELEY, DEAN OF LONDON DERRY, UPON READ-
ING HIS BOOKS OF THE PRINCIPLES OF HUMAN KNOWLEDGE
AND. DIALOGUES. SEPT. 10, 1729.

Stratford, Sept. 10, 1729.

Rev'd Sir: —

The kind invitation you gave me to lay before you any difficulties that should occur to me in reading those excellent books which you was pleased to order into my hands, is all the apology I shall offer for the trouble I now presume to give you. But nothing could encourage me to expose to your view my low and mean way of thinking and writing, but my hopes of an interest in that candor and tenderness which are so conspicuous both in your writings and conversation.

These books (for which I stand humbly obliged to you) contain speculations the most surprisingly ingenious I have ever met with; and I must confess that the reading of them has almost convinced me that matter as it has been commonly defined for an unknown Quiddity is but a mere non-entity. That it is a strong presumption against the existence of it, that there never could be conceived any manner of connection between it and our ideas. That the *esse* of things is only their *percipi*; and that the rescuing us from the absurdities of abstract ideas and the gross notion of matter that have so much obtained, deserves well of the learned world, in that it clears away very many difficulties and perplexities in the sciences.

And I am of opinion that this way of thinking can't fail of prevailing in the world, because it is likely to prevail very much among us in these parts, several ingenious men having entirely come in to it. But there are many others on the other hand that cannot be reconciled to it; tho' of these there are some who have a very good opinion of it and plainly see many happy consequences attending it, on account of which they are well inclined to embrace it, but think they find some difficulties in their way which they can't get over, and some objections not sufficiently answered to their satisfaction. And since you have condescended to give me leave to do so, I will make bold to lay before you sundry things,

which yet remain in the dark either to myself or to others, and which I can't account for either to my own, or at least to their satisfaction.

1. The great prejudice that lies against it with some is its repugnancy to and subversion of Sir I. Newton's philosophy in sundry points; to which they have been so much attached that they can't suffer themselves in the least to call it in question in any instance, but indeed it does not appear to me so inconsistent therewith as at first blush it did, for the laws of nature which he so happily explains are the same whether matter be supposed or not. However, let Sir Isaac Newton, or any other man, be heard only so far as his opinion is supported by reason:—but after all I confess I have so great a regard for the philosophy of that great man, that I would gladly see as much of it as may be, to obtain in this ideal scheme.

2. The objection, that it takes away all subordinate natural causes, and accounts for all appearances merely by the immediate will of the supreme spirit, does not seem to many to be answered to their satisfaction. It is readily granted that our ideas are inert, and can't cause one another, and are truly only signs one of another. For instance my idea of fire is not the cause of my idea of burning and of ashes. But inasmuch as these ideas are so connected as that they seem necessarily to point out to us the relations of cause and effect, we can't help thinking that our ideas are pictures of things without our minds at least, tho' not without the Great Mind, and which are their archetypes, between which these relations do obtain. I kindle a fire and leave it, no created mind beholds it; I return again and find a great alteration in the fuel; has there not been in my absence all the while that gradual alteration making in the archetype of my idea of wood which I should have had the idea of if I had been present? And is there not some archetype of my idea of the fire, which under the agency of the Divine Will has gradually caused this alteration? And so in all other instances, our ideas are so connected, that they seem necessarily to refer our minds to some originals which are properly (tho' subordinate) causes and effects one of another; insomuch that unless they be so, we can't help thinking ourselves under a perpetual delusion.

3. That all the phenomena of nature, must ultimately be referred to the will of the Infinite Spirit, is what must be allowed; but to suppose his immediate energy in the production of every effect, does not seem to impress so lively and great a sense of his power

and wisdom upon our minds, as to suppose a subordination of causes and effects among the archetypes of our ideas, as he that should make a watch or clock of ever so beautiful an appearance and that should measure the time ever so exactly yet if he should be obliged to stand by it and influence and direct all its motions, he would seem but very deficient in both his ability and skill in comparison with him who should be able to make one that would regularly keep on its motion and measure the time for a considerable while without the intervention of any immediate force of its author or any one else impressed upon it.

4. And as this tenet seems thus to abate our sense of the wisdom and power of God, so there are some that cannot be persuaded that it is sufficiently cleared from bearing hard on his holiness; those who suppose that the corrupt affections of our souls and evil practices consequent to them, are occasioned by certain irregular mechanical motions of our bodies, and that these motions come to have an habitual irregular bias and tendency by means of our own voluntary indulgence to them, which we might have governed to better purpose, do in this way of thinking, sufficiently bring the guilt of those ill habits and actions upon ourselves; but if in an habitual sinner, every object and motion be but an idea, and every wicked appetite the effect of such a set of ideas, and these ideas, the immediate effect of the Almighty upon his mind; it seems to follow, that the immediate cause of such ideas must be the cause of those immoral appetites and actions; because he is borne down before them seemingly, even in spite of himself. At first indeed they were only occasions, which might be withstood, and so, proper means of trial, but now they become causes of his immoralities. When therefore a person is under the power of a vicious habit, and it can't but be foreseen that the suggestion of such and such ideas will unavoidably produce those immoralities, how can it consist with the holiness of God to suggest them?

5. It is, after all that has been said on that head, still something shocking to many to think that there should be nothing but a mere show in all the art and contrivance appearing in the structure (for instance) of a human body, particularly of the organs of sense. The curious structure of the eye, what can it be more than merely a fine show, if there be no connection more than you admit of, between that and vision? It seems from the make of it to be designed for an instrument or means of conveying the images of

external things to the perceptive faculty within; and if it be not so, if it be really of no use in conveying visible objects to our minds, and if our visible ideas are immediately created in them by the will of the Almighty, why should it be made to seem to be an instrument or medium as much as if indeed it really were so? It is evident, from the conveying of images into a dark room thro' a lens, that the eye is a lens, and that the images of things are painted on the bottom of it. But to what purpose is all this, if there be no connection between this fine apparatus and the π of vision; can it be thought a sufficient argument that there is no connection between them because we can't discover it, or conceive how it should be?

6. There are some who say, that if our sensations don't depend on any bodily organs — they don't see how death can be supposed to make any alteration in the manner of our perception, or indeed how there should be (properly speaking) any separate state of the soul at all. For if our bodies are nothing but ideas, and if our having ideas in this present state does not depend upon what are thought to be the organs of sense, and lastly, if we are supposed (as doubtless we must) to have ideas in that state; it should seem that immediately upon our remove from our present situation, we should still be attended with the same ideas of bodies as we have now, and consequently with the same bodies or at least with bodies however different, and if so, what room is there left for any resurrection, properly so-called? So that while this tenet delivers us from the embarrassments that attend the doctrine of a material resurrection, it seems to have no place for any resurrection at all, at least in the sense that word seems to bear in St. John 5; 28, 29.

7. Some of us are at a loss to understand your meaning when you speak of archetypes. You say the beings of things consists in their being perceived. And that things are nothing but ideas, that our ideas have no unperceived archetypes, but yet you allow archetypes to our ideas when things are not perceived by our minds; they exist in, *i.e.*, are perceived by, some other mind. Now I understand you, that there is a two-fold existence of things or ideas, one in the divine mind, and the other in created minds; the one archetypal, and the other ectypal; that, therefore, the real original and permanent existence of things is archetypal, being ideas in *mente Divinâ*, and that our ideas are copies of them, and so far forth real things as they are correspondent to their archetypes and exhibited to us, or begotten in us by the will of the Almighty, in

such measu and degrees and by such stated laws and rules as He is pleased to observe; that, therefore, there is no unperceived substance intervening between the divine ideas and ours as a medium, occasion or instrument by which He begets our ideas in us, but that which was thought to be the material existence of things is in truth only ideal in the divine mind. Do I understand you right? Is it not therefore your meaning, that the existence of our ideas (*i. e.*, the ectypal things) depends upon our perceiving them, yet there are external to any created mind, in the all-comprehending Spirit, real and permanent archetypes (as stable and permanent as ever matter was thought to be), to which these ideas of ours are correspondent, and so that (tho' our visible and tangible ideas are *toto coelo* different and distinct things, yet) there may be said to be external to my mind, in the divine mind, an archetype (for instance of the candle that is before me) in which the originals of both my visible and tangible ideas, light, heat, whiteness, softness, etc., under such a particular cylindrical figure, are united, so that it may be properly said to be the same thing that I both see and feel?

8. If this, or something like it might be understood to be your meaning, it would seem less shocking to say that we don't see and feel the same thing, because we can't dispossess our minds of the notion of an external world, and would be allowed to conceive that, tho' there were no intelligent creature before Adam to be a spectator of it, yet the world was really six days in *archetypo*, gradually proceeding from an informal chaotic state into that beautiful show wherein it first appeared to his mind, and that the comet that appeared in 1680 (for instance) has now, tho' no created mind beholds it, a real existence in the all-comprehending spirit, and is making its prodigious tour through the vast fields of ether, and lastly that the whole vast congeries of heaven and earth, the mighty systems of worlds with all their furniture, have a real being in the eternal mind antecedent to and independent on the perception of created spirit, and that when we see and feel, etc., that that almighty mind, by his immediate *fiat*, begets in our minds (*pro nostro modulo*) ideas correspondent to them, and which may be imagined in some degree resemblances of them.

9. But if there be archetypes to our ideas, will it not follow that there is external space, extention, figure and motion, as being archetypes of our ideas, to which we give these names. And indeed

for my part I cannot disengage my mind from the persuasion that there is external space; when I have been trying ever so much to conceive of space as being nothing but an idea in my mind, it will return upon me even in spite of my utmost efforts, certainly there must be, there can't but be, external space. The length, breadth, and thickness of any idea, it's true, are but ideas; the distance between two trees in my mind is but an idea, but if there are archetypes to the ideas of the trees, there must be an archetype to the idea of the distance between them. Nor can I see how it follows that there is no external absolute height, bigness, or distance of things, because they appear greater or less to us according as we are nearer or remote from them, or see them with our naked eyes, or with glasses; any more than it follows that a man, for instance, is not really absolutely six foot high measured by a two foot rule applied to his body, because divers pictures of him may be drawn some six, some four, some two foot long according to the same measure. Nobody ever imagined that the idea of distance is without the mind, but does it therefore follow that there is no external distance to which the idea is correspondent, for instance, between Rhode Island and Stratford? Truly I wish it were not so great, that I might be so happy as to have a more easy access to you, and more nearly enjoy the advantages of your instructions.

10. You allow spirits to have a real existence external to one another. Methinks, if so, there must be distance between them, and space wherein they exist, or else they must all exist in one individual spot or point, and as it were coincide one with another. I can't see how external space and duration are any more abstract ideas than spirits. As we have (properly speaking) no ideas of spirits, so, indeed, neither have we of external space and duration. But it seems to me that the existence of these must unavoidably follow from the existence of those, insomuch that I can no more conceive of their not being, than I can conceive of the non-existence of the infinite and eternal mind. They seem as necessarily existent independent of any created mind as the Deity Himself. Or must we say there is nothing in Dr. Clarke's argument *a priori*, in his demonstration of the being and attributes of God, or in what Sir Isaac Newton says about the infinity and eternity of God in his *Scholium Generale* to his *Principia*? I should be glad to know your sense of what those two authors say upon this subject.

11. You will forgive the confusedness of my thoughts and not

wonder at my writing like a man something bewildered, since I am, as it were, got into a new world amazed at everything about me. These ideas of ours, what are they? Is the substance of the mind the *substratum* to its ideas? Is it proper to call them modifications of our minds? Or impressions upon them? Or what? Truly I can't tell what to make of them, any more than of matter itself. What is the *esse* of spirits?—you seem to think it impossible to abstract their existence from their thinking. *Princ.* p. 143. sec. 98. Is then the *esse* of minds nothing else but *percipere*, as the *esse* of ideas is *percip*? Certainly, methinks there must be an unknown somewhat that thinks and acts, as difficult to be conceived of as matter, and the creation of which, as much beyond us as the creation of matter. Can actions be the *esse* of any thing? Can they exist or be exerted without some being who is the agent? And may not that being be easily imagined to exist without acting, *e. g.*, without thinking? And consequently (for you are there speaking of duration) may he not be said *durare, etsi non cogitet*, to persist in being, tho' thinking were intermitted for a while? And is not this sometimes fact? The duration of the eternal mind, must certainly imply some thing besides an eternal succession of ideas. May I not then conceive that, tho' I get my idea of duration by observing the succession of ideas in my mind, yet there is a *perseverare in existendo*, a duration of my being, and of the being of other spirits distinct from, and independent of, this succession of ideas.

But, Sir, I doubt I have more than tired your patience with so many (and I fear you will think them impertinent) questions; for tho' they are difficulties with me, or at least with some in my neighborhood, for whose sake, in part, I write, yet I don't imagine they can appear such to you, who have so perfectly digested your thoughts upon this subject. And perhaps they may vanish before me upon a more mature consideration of it. However, I should be very thankful for your assistance, if it were not a pity you should waste your time (which would be employed to much better purposes) in writing to a person so obscure and so unworthy of such a favor as I am. But I shall live with some impatience till I see the second part of your design accomplished, wherein I hope to see these (if they can be thought such) or any other objections, that may have occurred to you since your writing the first part, obviated; and the usefulness of this doctrine more particularly displayed in the further application of it to the arts and sciences. May we not hope

to see logic, mathematics, and natural philosophy, pneumatology, theology and morality, all in their order, appearing with a new lustre under the advantages they may receive from it? You have at least given us to hope for a geometry cleared of many perplexities that render that sort of study troublesome, which I shall be very glad of, who have found that science more irksome to me than any other, tho', indeed, I am but very little versed in any of them. But I will not trespass any further upon your patience. My very humble service to Mr. James and Mr. Dalton, and I am with the greatest veneration,

Rev'd Sir,
 your most obliged
 and most obedient
 humble servant
 Samuel Johnson

GEORGE BERKELEY TO SAMUEL JOHNSON. NOV. 25, 1729.

Nov. 25, 1729.

Rev. Sir:—

The ingenious letter you favored me with found me very much indisposed with a gathering or imposthuration in my head, which confined me several weeks, and is now, I thank God, relieved. The objections of a candid thinking man to what I have written will always be welcome, and I shall not fail to give all the satisfaction I am able, not without hopes either of convincing or being convinced. It is a common fault for men to hate opposition, and be too much wedded to their own opinions. I am so sensible of this in others that I could not pardon it to myself, if I considered mine any further than they seem to me to be true, which I shall the better be able to judge of when they have passed the scrutiny of persons so well qualified to examine them as you and your friends appear to be, to whom my illness must be an apology for not sending this answer sooner.¹

¹ This letter, which Fraser in his *Berkeley's Complete Works* dates June 25, 1729, following Beardsley, should be dated November 25, 1729. See Johnson's reply of February 5, 1730. There is no evidence that any letter was written in June, but merely that Berkeley had sent Johnson some books, not, however, *The Principles of Human Knowledge*, and *De Motu*, which were sent after Feb. 5, 1730. The eleven points which are supposed to have been contained in the "lost" letter of June 25, are merely an inference from the eleven

1. The true use and end of natural philosophy is to explain the phenomena of nature, which is done by discovering the laws of nature, and reducing particular appearances to them. This is Sir Isaac Newton's method; and such method or design is not in the least inconsistent with the principles I lay down. This mechanical philosophy doth not assign or suppose any one natural efficient cause in the strict and proper sense; nor is it, as to its use, concerned about *matter*; nor is matter connected therewith; nor doth it infer the being of matter. It must be owned, indeed, that the mechanical philosophers do suppose (though unnecessarily) the being of matter. They do even pretend to demonstrate that matter is proportional to gravity, which, if they could, this indeed would furnish an unanswerable objection. But let us examine their demonstration — it is laid down in the first place, that the momentum of any body is the product of its quantity by its velocity, *moles in celeritatem ducta*. If, therefore, the velocity is given, the momentum will be as its quantity. But it is observed that bodies of all kinds descend *in vacuo* with the same velocity; therefore, the momentum of descending bodies is as the quantity of moles, *i.e.*, gravity is as matter. But this argument concludes nothing, and is a mere circle. For, I ask, when it is premised that the momentum is equal to the *moles in celeritatem ducta*, how the moles or quantity of matter is estimated. If you say, by extent, the proposition is not true; if by weight, then you suppose that the quantity of matter is proportional to matter: *i.e.*, the conclusion is taken for granted in one of the premises. As for absolute space and motion, which are also supposed without any necessity or use, I refer you to what I have already published; particularly in a Latin treatise, *De Motu*, which I shall take care to send you.

2. Cause is taken in different senses. A proper active efficient cause I can conceive none but spirit; nor any action, strictly speaking, but where there is will. But this doth not hinder the allowing occasional causes (which are in truth but signs), and more is not requisite in the best physics, *i.e.*, the mechanical philosophy. Neither doth it hinder the admitting other causes besides God; such as spirits of different orders, which may be termed active causes, as acting indeed, though by limited and derivative powers. But as

points in Johnson's letter of September 10, 1729, to six of which Berkeley replied on November 25, and there is no reason to suppose that Johnson's letter of September 10 is a reply to any letter whatsoever. [The Editors.]

for an unthinking agent, no point of physics is explained by it, nor is it conceivable.

3. Those who have all along contended for a material world, have yet acknowledged that *natura naturans* (to use the language of the Schoolmen) is God; and that the divine conservation of things is equipollent to, and in fact, the same thing with a continued repeated creation; in a word, that conservation and creation differ only in the *terminus a quo*. These are the common opinions of the Schoolmen; and Durandus, who held the world to be a machine like a clock, made and put in motion by God, but afterwards continuing to go of itself, was therein particular and had few followers. The very poets teach a doctrine not unlike the schools, — *Mens agitat molem*. (Virg. Aenid VI.) The Stoics and Platonists are everywhere full of the same notion. I am not therefore singular in this point itself, so much as in my way of proving it. Further, it seems to me that the power and wisdom of God are as worthily set forth by supposing Him to act immediately as an omnipresent, infinitely active spirit, as by supposing Him to act by the mediation of subordinate causes, in preserving and governing the natural world. A clock may indeed go independent of its maker or artificer, inasmuch as the gravitation of its pendulum proceeds from another cause, and that the artificer is not the adequate cause of the clock; so that the analogy would not be just to suppose a clock is in respect of its artist what the world is in respect of its creator. For aught I can see, it is no disparagement to the perfection of God to say that all things necessarily depend on Him as their conservator as well as creator, and that all nature would shrink to nothing, if not upheld and preserved in being by the same force that first created it. This, I am sure, is agreeable to Holy Scripture, as well as to the writings of the most esteemed philosophers; and if it is to be considered that men make use of tools and machines to supply defect of power in themselves, we shall think it no honor to the divinity to attribute such things to him.

4. As to guilt, it is the same thing whether I kill a man with my hands or an instrument; whether I do it myself or make use of a ruffian. The imputation therefore upon the sanctity of God is equal, whether we suppose our sensations to be produced immediately by God, or by the mediation of instruments and subordinate causes, all which are his creatures, and moved by his laws. This theological

consideration, therefore, may be waived, as leading besides the question; for such I hold are points to be which bear equally hard on both sides of it. Difficulties about the principle of moral actions will cease, if we consider that all guilt is in the will, and that our ideas, from whatever cause they are produced, are alike inert.

5. As to the art and contrivance in the parts of animals, etc., I have considered that matter in the *Principles of Human Knowledge*, and, if I mistake not, sufficiently shown the wisdom and use thereof, considered as ends and means of information. I do not indeed wonder that on a first reading what I have written, men are not thoroughly convinced. On the contrary, I should very much wonder if prejudices, which have been many years taking root, should be extirpated in a few hours' reading. I had no inclination to trouble the world with large volumes. What I have done was rather with a view of giving hints to thinking men, who have leisure and curiosity to go to the bottom of things, and pursue them in their own minds. Two or three times reading these small tracts, and making what is read the occasion of thinking, would, I believe, render the whole familiar and easy to the mind, and take off that shocking appearance which hath often been observed to attend speculative truths.

6. I see no difficulty in conceiving a change of state, such as is vulgarly called death, as well without as with material substance. It is sufficient for that purpose that we allow sensible bodies, *i.e.*, such as are immediately perceived by sight and touch; the existence of which I am so far from questioning (as philosophers are used to do) that I establish it, I think, upon evident principles. Now, it seems very easy to conceive the soul to exist in a separate state (*i.e.* divested from those limits and laws of motion and perception with which she is embarrassed here), and to exercise herself on new ideas, without the intervention of these tangible things we call bodies. It is even very possible to apprehend how the soul may have ideas of color without an eye, or of sounds without an ear. . . .

And now, Sir, I submit these hints (which I have hastily thrown together as soon as my illness gave me leave) to your own maturer thoughts, which after all you will find the best instructors. What you have seen of mine was published when I was very young, and without doubt hath many defects. For though the notions should be true (as I verily think they are), yet it is difficult to express them clearly and consistently, language being framed to common use

and received prejudices. I do not therefore pretend that my books can teach truth. All I hope for is that they may be an occasion to inquisitive men of discovering truth by consulting their own minds and looking into their own thoughts. As to the second part of my treatise concerning the principles of human knowledge, the fact is that I had made a considerable progress in it, but the manuscript was lost about fourteen years ago during my travels in Italy; and I never had leisure since to do so disagreeable a thing as writing twice on the same subject.

Objections passing through your hands have their full force and clearness. I like them the better. This intercourse with a man of parts and a philosophic genius is very agreeable. I sincerely wish we were nearer neighbors. In the meantime whenever either you or your friends favor me with your thoughts, you may be sure of a punctual correspondence on my part. Before I have done I will venture to recommend three points: 1. To consider well the answers I have already given in my books to several objections. 2. To consider whether any new objection that shall occur doth not suppose the doctrine of abstract general ideas. 3. Whether the difficulties proposed in objection to my scheme can be solved by the contrary, for if they cannot, it is plain they can be no objection to mine.

I know not whether you have got my treatise concerning the principles of human knowledge. I intend to send it with my tract *De Motu*. If you know of a safe hand favor me with a line, and I will make use of that opportunity to send them. My humble service to your friends, to whom I understand myself indebted for some part of your letter.

I am, your very faithful, humble servant,

Geor. Berkeley

TO THE REV'D DR. BERKELEY. FEB. 5, 1730.

Rev'd Sir:—

Yours of November 25th, I received not till January 17th, and this being the first convenient opportunity I now return you my humblest thanks for it.

I am very sorry to understand that you have labored under the illness you mention, but am exceeding glad and thankful for your recovery; I pray God preserve your life and health, that you may have opportunity to perfect these great and good designs for the

advancement of learning and religion wherewith your mind labors.

I am very much obliged to you for the favorable opinion you are pleased to express at what I made bold to write to you and that you have so kindly vouchsafed so large and particular an answer to it. But you have done me too great an honor in putting any value on my judgment; for it is impossible my thoughts on this subject should be of any consequence, who have been bred up under the greatest disadvantages, and have had so little ability and opportunity to be instructed in things of this nature. And therefore I should be very vain to pretend any thing else but to be a learner; 'tis merely with this view that I give you this trouble.

I am sensible that the greatest part of what I wrote was owing to not sufficiently attending to those three important considerations you suggest at the end of your letter. And I hope a little more time and a more careful attention to and application of them, will clear up what difficulties yet lie in the way of our entirely coming into your sentiments. Indeed I had not had opportunity sufficiently to digest your books; for no sooner had I just read them over, but they were greedily demanded by my friends, who live much scattered up and down, and who expected I would bring them home with me, because I had told them before that if the books were to be had in Boston, I intended to purchase a set of them; and indeed they have not yet quite finished their tour. The *Theory of Vision* is still at New York and the *Dialogues* just gone to Long Island. But I am the better content to want them because I know they are doing good.

For my part I am content to give up the cause of matter, glad to get rid of the absurdities thereon depending if it be defensible, I am sure, at least, it is not in my power to defend it. And being spoiled of that sandy foundation, I only want now to be more thoroughly taught how and where to set down my foot again and make out a clear and consistent scheme without it. And of all the particulars I troubled you with before, there remain only these that I have difficulty about, *viz.*, archetypes, space and duration, and the *esse* of spirits. And indeed these were the chief of my difficulties before. Most of the rest were such objections as I found by conversation among my acquaintance, did not appear to them sufficiently answered. But I believe upon a more mature consideration of the matter, and especially of this kind reply, they will see reason

to be better satisfied. They that have seen it (especially my friend Mr. Wetmore) join with me in thankfully acknowledging your kindness, and return their very humble service to you.

1. As to those difficulties that yet remain with me, I believe all my hesitation about the first of them (and very likely the rest) is owing to my dulness and want of attention so as not rightly to apprehend your meaning. I believe I expressed myself unworthily about archetypes in my 7th and 8th articles, but upon looking back upon your *Dialogues*, and comparing again three or four passages, I can't think I meant any thing different from what you intended.

You allow, *Dial.* p. 74, "That things have an existence distinct from being perceived by us" (*i. e.*, any created spirits), "and that they exist in, *i. e.*, are perceived by, the infinite and omnipresent mind who contains and supports this sensible world as being perceived by him." And p. 109, "That things have an existence exterior to our minds, and that during the intervals of their being perceived by us, they exist in another (*i. e.*, the infinite) mind"; from whence you justly and excellently infer the certainty of his existence, "who knows and comprehends all things and exhibits them to our view in such manner and according to such rules as he himself has ordained." And p. 113, "That, *e. g.*, a tree, when we don't perceive it, exists without our minds in the infinite mind of God." And this exterior existence of things (if I understand you right) is what you call the archetypal state of things. p. 150.

From these and the like expressions, I gathered what I said about the archetypes of our ideas, and thence inferred that there is exterior to us, in the divine mind, a system of universal nature, whereof the ideas we have are in such a degree resemblances as the Almighty is pleased to communicate to us. And I cannot yet see but my inference was just; because according to you, the idea we see is not in the divine mind, but in our own. When, therefore, you say sensible things exist in, as understood by, the infinite mind I humbly conceive you must be understood that the originals or archetypes of our sensible things or ideas exist independent of us in the infinite mind, or that sensible things exist *in archetypo* in the divine mind. The divine idea, therefore, of a tree suppose (or a tree in the divine mind), must be the original or archetype of ours, and ours a copy or image of His (our ideas images of His, in the same sense as our souls are images of Him) of which there may be several, in several

created minds, like so many several pictures of the same original to which they are all to be referred.

When therefore, several people are said to see the same tree or star, etc., whether at the same or at so many several distances from it, it is (if I understand you) *unum et idem in Archetypo*, tho' *multiplex et diversum in Ectypo*, for it is as evident that your idea is not mine nor mine yours when we say we both look on the same tree, as that you are not I nor I you. But in having each our idea being dependent upon and impressed upon by the same almighty mind, wherein you say this tree exists, while we shut our eyes (and doubtless you mean the same also, while they are open), our several trees must, I think be so many pictures (if I may so call them) of the one original, the tree in the infinite mind, and so of all other things. Thus I understand you not indeed that our ideas are in any measure adequate resemblances of the system in the divine mind, but however that they are just and true resemblances or copies of it, so far as He is pleased to communicate His mind to us.

2. As to space and duration, I do not pretend to have any other notion of their exterior existence than what is necessarily implied in the notion we have of God; I do not suppose they are any thing distinct from, or exterior to, the infinite and external mind; for I conclude with you that there is nothing exterior to my mind but God and other spirits with the attributes or properties belonging to them and ideas contained in them.

External space and duration therefore I take to be those properties or attributes in God, to which our ideas, which we signify by those names, are correspondent, and of which they are the faint shadows. This I take to be Sir Isaac Newton's meaning when he says, *Schol. General. Deus — durat semper et adest ubique et existendo semper et ubique, durationem et spacium, eternitatem et infinitatem constituit*. And in his *Optics* calls space as it were God's *boundless sensorium*, nor can I think you have a different notion of these attributes from that great philosopher, tho' you may differ in your ways of expressing or explaining yourselves. However it be, when you call the Deity infinite and eternal, and in that most beautiful and charming description, *Dial.* p. 71. etc., when you speak of the *abyss of space and boundless extent beyond thought and imagination*, I don't know how to understand you any other-

wise than I understood Sir Isaac, when he uses the like expressions. The truth is we have no proper ideas of God or His attributes, and conceive of them only by analogy from what we find in ourselves; and so, I think we conceive His immensity and eternity to be what in Him are correspondent to our space and duration.

As for the *punctum stans* of the Schools, and the *to nun* of the Platonists, they are notions too fine for my gross thoughts; I can't tell what to make of those words, they don't seem to convey any ideas or notions to my mind, and whatever the matter is, the longer I think of them, the more they disappear, and seem to dwindle away into nothing. Indeed they seem to me very much like abstract ideas, but I doubt the reason is because I never rightly understood them. I don't see why the term *punctum stans* may not as well, at least, be applied to the immortality as the eternity of God; for the word *punctum* is more commonly used in relation to extension or space than duration; and to say that a being is immense, and yet that it is but a point, and that its duration is perpetual without beginning or end, and yet that it is but a *to nun*, look to me like a contradiction.

I can't therefore understand the term *to nun* unless it be designed to adumbrate the divine omniscieny or the perfection of the divine knowledge, by the more perfect notion we have of things present than of things past; and in this sense it would imply that all things past, present and to come are always at every point of duration equally perfectly known or present to God's mind (tho' in a manner infinitely more perfect), as the things that are known to us are present to our minds at any point of our duration which we call *now*. So that with respect to His equally perfect knowledge of things past, present or to come, it is in effect always now with Him. To this purpose it seems well applied and intelligible enough, but His duration I take to be a different thing from this, as that point of our duration which we call *now*, is a different thing from our actual knowledge of things, as distinguished from our remembrance. And it may as well be said that God's immensity consists in His knowing at once what is, and is transacted in all places (*e. g.*, China, Jupiter, Saturn, all the systems of fixed stars, etc.) everywhere, however so remote from us (tho' in a manner infinitely more perfect), as we know what is, and is transacted in us and about us just at hand; as that His eternity consists in this *to nun* as above explained, *i. e.*, in His knowing things present, past and to

come, however so remote, all at once or equally perfectly as we know the things that are present to us *now*.

In short our ideas expressed by the terms immensity and eternity are only space and duration considered as boundless or with the negation of any limits, and I can't help thinking there is something analogous to them without us, being in and belonging to, or attributes of, that glorious mind, whom for that reason we call immense and eternal, in whom we and all other spirits, *live, move and have their being*, not all in a point, but in so many different points places or *alicubis*, and variously situated with respect one to another, or else as I said before, it seems as if we should all coincide one with another.

I conclude, if I am wrong in my notion of eternal space, and duration, it is owing to the rivetted prejudices of abstract ideas; but really when I have thought it over and over again in my feeble way of thinking, I can't see any connection between them (as I understand them) and that doctrine. They don't seem to be any more abstract ideas than spirits, for, as I said, I take them to be attributes of the necessarily existing spirit; and consequently the same reasons that convince me of his existence, bring with them the existence of these attributes. So that of the ways of coming to the knowledge of things that you mention, it is that of inference or deduction by which I seem to know that there is external infinite space and duration because there is without me a mind infinite and eternal.

3. As to the *esse* of spirits, I know Descartes held the soul always thinks, but I thought Mr. Locke had sufficiently confuted this notion, which he seems to have entertained only to serve an hypothesis. The Schoolmen, it is true, call the soul *Actus* and God *Actus purus*; but I confess I could never well understand their meaning perhaps because I never had opportunity to be much versed in their writings. I should have thought the schoolmen to be of all sorts of writers the most unlikely to have had recourse to for the understanding of your sentiments, because they of all others, deal the most in abstract ideas; tho' to place the very being of spirits in the mere act of thinking, seems to me very much like making abstract ideas of them.

There is certainly something passive in our souls, we are purely passive in the reception of our ideas; and reasoning and willing are actions of something that reasons and wills, and therefore

must be only modalities of that something. Nor does it seem to me that when I say [something] I mean an abstract idea. It is true I have no idea of it, but I feel it; I feel that it is, because I feel or am conscious of the exertions of it; but the exertions of it are not the thing but the modalities of it distinguished from it as actions from an agent, which seems to me distinguishable without having recourse to abstract ideas.

And, therefore, when I suppose the existence of a spirit while it does not actually think, it does not appear to me that I do it by supposing an abstract idea of existence, and another of absolute time. The existence of John asleep by me, without so much as a dream is not an abstract idea. Nor is the time passing the while an abstract idea, they are only partial considerations of him. *Perseverare in existendo* in general, without reflecting on any particular thing existing, I take to be what is called an abstract idea of time or duration; but the *perseverare in existendo* of John is, if I mistake not, a partial consideration of him. And I think it is as easy to conceive of him as continuing to exist without thinking as without seeing.

Has a child no soul till it actually perceives? And is there not such a thing as sleeping without dreaming, or being in a *deliquium* without a thought? If there be, and yet at the same time the *esse* of a spirit be nothing else but its actual thinking, the soul must be dead during those intervals; and if ceasing or intermitting to think be the ceasing to be, or death of the soul, it is many times and easily put to death. According to this tenet, it seems to me the soul may sleep on to the resurrection, or rather may wake up in the resurrection state, the next moment after death. Nay I don't see upon what we can build any natural argument for the soul's immortality. I think I once heard you allow a principle of perception and spontaneous motion in beasts. Now if their *esse* as well as ours consists in perceiving, upon what is the natural immortality of our souls founded that will not equally conclude in in favor of them? I mention this last consideration because I am at a loss to understand how you state the argument for the soul's natural immortality; for the argument from thinking to immaterial and from thence to indivisible, and from thence to immortal don't seem to obtain in your way of thinking.

If *esse* be only *percipere*, upon what is our consciousness founded? I perceived yesterday, and I perceive now, but last night

between my yesterday's and today's perception there has been an intermission when I perceived nothing. It seems to me there must be some principle common to these perceptions, whose *esse* don't depend on them, but in which they are, as it were, connected, and on which they depend, whereby I am and continue conscious of them.

Lastly, Mr. Locke's argument (B. 2. Ch. 19. Sec. 4.) from the intention and remission of thought, appears to me very considerable; according to which, upon this supposition the soul must exist more or have a greater degree of being at one time than at another, according as it thinks more intensely or more remissly.

I own I said very wrong when I said I did not know what to make of ideas more than of matter. My meaning was, in effect, the same as I expressed afterwards about the substance of the soul's being a somewhat as unknown as matter. And what I intended by those questions was whether our ideas are not the substance of the soul itself, under so many various modifications, according to that saying (if I understand it right) *Intellectus intelligendo fit omnia*? It is true, those expressions (modifications, impressions, etc.) are metaphorical, and it seems to me to be no less so, to say that ideas exist in the mind, and I am under some doubt whether this last way of speaking don't carry us further from the thing, than to say ideas are the mind variously modified; but as you observe, it is scarce possible to speak of the mind without a metaphor.

Thus Sir, your goodness has tempted me to presume again to trouble you once more; and I submit the whole to your correction; but I can't conclude without saying that I am so much persuaded that your books teach truth, indeed the most excellent truths, and that in the most excellent manner, that I can't but express myself again very solicitously desirous that the noble design you have begun may be yet further pursued in the second part. And everybody that has seen the first is earnestly with me in this request. In hopes of which I will not desire you to waste your time in writing to me (tho' otherwise I should esteem it the greatest favor), at least till I have endeavored further to gain satisfaction by another perusal of the books I have, with the other pieces you are so kind as to offer, which I will thankfully accept, for I had not *The Principles* of my own, it was a borrowed one I used.

The bearer hereof, Capt. Gorham, is a coaster bound now to Boston, which trade he constantly uses (except that it has been now

long interrupted by the winter). But he always touches at Newport, and will wait on the Rev'd Mr. Honyman both going and returning, by whom you will have opportunity to send those books.

I am, Rev'd Sir,

with the greatest gratitude,
your most devoted humble servant,
S. Johnson

Stratford, Feb. 5, 1729/30

GEORGE BERKELEY TO SAMUEL JOHNSON. MAR. 24, 1730.

March 24, 1730.

Rev. Sir:—

Yours of Feb. 5th came not to my hands before yesterday; and this afternoon being informed that a sloop is ready to sail towards your town, I would not let slip the opportunity of returning you an answer, though wrote in a hurry. I have no objection against calling the ideas in the mind of God, archetypes of ours. But I object against those archetypes by philosophers supposed to be real things, and to have an absolute rational existence distinct from their being perceived by any mind whatsoever, it being the opinion of all materialists that an ideal existence in the divine mind is one thing, and the real existence of material things another.

1. As to space, I have no notion of any but that which is relative. I know some late philosophers have attributed extension to God, particularly mathematicians; one of whom, in a treatise *de Spacio reali*, pretends to find out fifteen of the incommunicable attributes of God in space. But it seems to me, that they being all negative, he might as well have found them in nothing; and that it would have been as justly inferred from space being impassive, uncreated, indivisible, etc., that it was nothing, as that it was God.

Sir Isaac Newton supposeth an absolute space different from relative, and consequent thereto, absolute motion different from relative motion; and with all other mathematicians, he supposeth the infinite divisibility of the finite parts of this absolute space; he also supposeth material bodies to drift therein. Now, though I do acknowledge Sir Isaac to have been an extraordinary man and most profound mathematician, yet I cannot agree with him in these particulars. I make no scruple to use the word space, as well as other words in common use, but I do not mean thereby a distinct absolute being. For my meaning I refer you to what I have published.

By the *to nun* I suppose to be implied that all things past and to come are actually present to the mind of God, and that there is in Him no change, variation, or succession — a succession of ideas I take to constitute time and not to be only the sensible measure thereof, as Mr. Locke and others think. But in these matters every man is to think for himself, and speak as he finds. One of my earliest inquiries was about time, which led me into several paradoxes that I did not think fit or necessary to publish, particularly into the notion that the resurrection follows next moment to death. We are confounded and perplexed about time. (1) Supposing a succession in God. (2) Conceiving that we have an abstract idea of time. (3) Supposing that the time in one mind is to be measured by the succession of ideas in another. (4) Not considering the true use and ends of words, which as often terminate in the will as the understanding, being employed rather to excite influence, and direct action than to produce clear and distinct ideas.

3. That the soul of man is passive as well as active I make no doubt. Abstract general ideas was a notion that Mr. Locke held in common with the Schoolmen, and I think all other philosophers; it runs through his whole book *Of Human Understanding*. He holds an abstract idea of existence exclusive of perceiving and being perceived. I cannot find I have any such idea, and this is my reason against it. Descartes proceeds upon other principles. One square foot of snow is as white as one thousand yards; one single perception is as truly a perception as one hundred. Now any degree of perception being sufficient to existence, it will not follow that we should say one existed more at one time than another, any more than we should say one thousand yards of snow are whiter than one yard. But after all, this comes to a verbal dispute. I think it might prevent a good deal of obscurity and dispute to examine well what I have said about abstraction, and about the true use of sense and significancy of words, in several parts of these things that I have published, though much remains to be said on that subject.

You say you agree with me that there is nothing within your mind but God and other spirits, with the attributes or properties belonging to them, and the ideas contained in them. This is a principle or main point from which, and from what I had laid down about abstract ideas, much may be deduced. But if in every inference we should not agree, so long as the main points are settled

and well understood, I should be less solicitous about particular conjectures. I could wish that all the things I have published on these philosophical subjects were read in the order wherein I published them, once to take the design and connection of them, and a second time with a critical eye, adding your own thought and observation upon every part as you went along. I send you herewith ten bound books and one unbound. You will take yourself what you have not already. You will give *The Principles*, *The Theory*, *The Dialogue*, one of each, with my service to the gentleman who is Fellow of New Haven College, whose compliments you brought me. What remains you will give as you please.

If at any time your affairs should draw you into these parts, you shall be very welcome to pass as many days as you can spend at my house. Four or five days' conversation would set several things in a fuller and clearer light than writing could do in as many months. In the meantime I shall be glad to hear from you or your friends when ever you please to favor,

Rev. Sir,

Your very humble servant,

Geor. Berkeley.

Pray let me know whether they would admit the writings of Hooker and Chillingworth into the library of the College in New Haven.

PART VIII

THE PHILOSOPHICAL CORRESPONDENCE
BETWEEN
SAMUEL JOHNSON AND CADWALLADER COLDEN

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CADWALLADER COLDEN TO SAMUEL JOHNSON. MAR. 26, 1744.

Sir: —

Coldenham, March 26, 1744.

I now take this opportunity, by Mr. Watkins, to return you my hearty thanks with the books you were pleased to send me. As to the Bishop's *New Theory of Vision*, I think he has explained some things better than had been done before, but as to the main design he labors at, I cannot say that I comprehend it. I allow that the object which reflects light is not in a proper sense the object of vision, no more than a bell or any other sounding body is the object of the sense of hearing, and yet I think we may without much impropriety say that we see or hear a bell as well as that we feel it, though it be certain that the bell is not the immediate object of the senses of seeing and hearing, as it is of the sense of feeling, and that it is only from reasoning and experience that we form the conception of the same objects affecting all the senses. If his sentiments do not differ from this conception of the matter, then I must look on a great part of his books to contain a most subtle disputation about the use of words. If his sentiments be different, I can form no conception of them. His mistake in the "Analyst," in my opinion, may be made very apparent, that he does not understand the doctrine of infinites or fluxions, as received by mathematicians, and this I think I can demonstrate. I formerly had illustrated the principles of that doctrine in writing, in order to assist my own imagination in forming a regular and true conception of it.

Since I received that book from you I have carefully re-examined what I had formerly wrote, and am so far from finding any defect in what was formerly clear to me, that I think I clearly see his error, that he has no conception of the principles of that doctrine. If you have a curiosity to be satisfied in this, I will send you a copy of my paper. It is contained in about two sheets of paper.

I assume the liberty always to be allowed in philosophizing to differ from any man without disrespect or disregard to his character, as I now do with respect to Bishop Berkeley, whose merit is very conspicuous, and whom I highly esteem.

I am, Sir,

Your humble servant,

Cadwallader Colden.

TO CADWALLADER COLDEN. APRIL 18, 1744.

Stratford, April 18, 1744.

Sir:—

I am very humbly obliged to you for yours of March 26. I am glad if Mr. Watkins has proved so acceptable among your people that you conceive good hopes of his being useful in promoting the good ends of the Society in your parts. What you mention to me of the 500 acres of land is indeed an affair of very considerable importance to that purpose: and I doubt not (it seems so clear a case) but, if it were properly recommended to the Bishop or Society, it might be obtained and be of great public advantage towards the promoting of religion and learning in the course of time, and would certainly be a strong inducement to the Society to send a missionary among you. But it appears to me that Mr. Commissary Vesey is the proper person to make a representation of it as it is an affair that lies within his province: however if you can point out anything to me within my power, whereby I can be useful in bringing it to pass, I should gladly assist in it. But I think it would not fail of success if your commissary should apply to the Society to desire their influence with your governor; or perhaps only your own mentioning it to him would answer the end, if such a disposition of it as you speak of be in the governor's power. I doubt Mr. Watkins, who was obliged to spend what fortune he had in getting his education is scarce able to defray the expense of his passage and undertaking in going for Orders, nor are his friends here able to do much for him: it would therefore be a good charity if you and Mr. Nichols could influence any good gentlemen in your province in making a collection towards defraying his expenses in this undertaking.

I am much obliged to you for the observations you have made upon Bp. Berkeley's *Principles* that I lent you. I take it that the great design of that gentleman, in what he wrote, was to banish scholasticism and all talk without any meaning out of philosophy, which you very well know, has been the bane of science in all other parts of learning, as well as in religion and morality. Mr. Locke went a great way in this, and did much service, but yet, while he continued the doctrine of abstract ideas, he was led to think and teach that there are some ideas common to several senses, in which the Bishop justly suggested he was mistaken; and indeed, to me it

looks as if he had demonstrated against him that tangible and visible extension are things *toto coelo* different tho' they both go by the same general name, and so of the rest.

If indeed you mean nothing by matter but what is immediately perceived by sense, as you do not at all differ from what he would be at, so you would, in this case, be right in thinking that a great part of his book is only a subtle dissertation about the use of words; but if you conceive matter to be something abstracted and pre-scinded from : the immediate objects of the senses, according to the old scholastic I say of it, and that it is *neque quid, neque quantum, neque quale, neque quod potest digito demonstrari*, you might perhaps think that a mere dispute about words was the very thing, and that only, which he opposed, and that he had a great deal of reason so to do. As to his mathematical series I confess I am not versed enough in the sublime mathematics to be a judge of them, and so can pronounce nothing on this subject. I am very loth to give you the trouble of transcribing, otherwise I should have a great curiosity to see what you have wrote upon it, in order that I might make a better judgment; but this is too great a favor for me to ask, tho' I am very thankful for your kind offer. I am much obliged to you for this copy of the Philadelphia plan for the promoting of useful knowledge, and wish gentlemen of capacity for it may encourage it. I am

Sir, your most obliged

humble servant,

Samuel Johnson.

CADWALLADER COLDEN TO SAMUEL JOHNSON. JUNE 2, 1746.

Coldenham, June 2, 1746.

Reverend Sir:—

I now desire Mr. Nicholls to send you a copy of the "Treatise" which I mentioned to you in my last. In it you will find my thoughts on some things which were the subject of your last to me by the Rev. Mr. Watkins. One thing I am desirous to be more fully informed of from you, how consciousness and intelligence become essential to all agents that act from a power in themselves. As to my own part, I do not perceive the necessary connection between power or force and intelligence or consciousness. We may certainly in a thousand objects of our senses discover power and force with-

out perceiving any intelligence in them. And though this power or force should be only apparent, and the consequence or effect of some other primary cause, yet I am certainly to be excused in my thinking it real till it appear otherwise to me, as I believe every man is to be excused who does not understand astronomy, and thinks that the sun moves, and this opinion cannot in any proper sense be called an absurdity in him.

In the next place I must beg you will give me a definition of matter, or of any other being merely passive, without any power or force or action. Such a being I cannot conceive, and therefore as to me does not exist.

You will oblige me exceedingly by giving your opinion of the printed "Treatise" or of any part of it without reserve. For my design only is to discover and be assured of the truth. You will find by some parts of that piece that though I have the greatest esteem of Sir Isaac Newton's knowledge and performances, I take the liberty to differ from him in some points. That man never existed who never erred. As I have a great esteem of your judgment, I am very desirous to have your opinion, of what I send as soon as may be with your conveniency, and thereby you will very much oblige,

Sir, your most humble servant,

Cadwallader Colden.

TO CADWALLADER COLDEN. JUNE 23, 1746.

Stratford, June 23, 1746.

Sir:—

I now return you my hearty thanks for yours of the 2d instant, and especially for your kind present that accompanied it. It is my sincere opinion that it is a very ingenious piece and the result of much and deep thought. There is one thing that I am much pleased with, which is, that you make the *resistance* of what you call matter to be an *action* deriving from a self-exerting principle. This I take to be a point of very great importance and use both in physics and metaphysics as well as religion. All the odds between you and me is that you make matter a self-exerting active principle, whereas I give that denomination only to what is merely passive and inert and give the name of spirit to that which is the principle of activity, pervading and agitating all things,

according to Virgil's philosophy, *mens agitat molem*, etc., which tho' it be the most ancient, I take to be nevertheless the most true and undoubted system; and that elasticity, attraction or pulsion and repulsion as well as resistance, or what Sir Isaac calls *vis inertiae*, and perhaps some other forces are so many exertions of the one universal intelligent self-exerting active principle who pervades all things, and in whom we live and move and have our being. Your attempt to assign the cause of gravitation appears to me a curious dissertation—but I have hardly furniture and force of mind enough to comprehend it, having for many years discontinued those kind of studies, and indeed never turned my thoughts that way so closely as I find you have done, nor had proper means to enable me for it; your system seems to me pretty near of kin to Mr. Hutchinson's, as far as I have had opportunity to be acquainted with his from my Lord Forbes, but I believe you have much outdone him in the exactness of your range of thoughts and mathematical reasoning, but I think his notion of pulsion or protrusion is something like yours; however, I dare not pronounce.

And now in answer to your candid inquiries. You ask, *how consciousness and intelligence become essential to all agents that act from a power within themselves?* Where by a *power within themselves* I apprehend you mean a *principle of activity* belonging to their own proper essence, and not either arbitrarily annexed to them or exerting itself in and by them. To which I answer: A power [of] action without a principle of self-exertion and activity in which it resides I can have no notion of; and a blind senseless power or principle of activity appears to me repugnant and if it were possible, it would be [so] far from being of any use in nature that it would be mischievous without a mind to direct and over rule it. In fact we find that all the motions and consequently actions in nature are conformable to the wisest laws and rules ever aiming at some useful end which evidently discovers design and contrivance, and must therefore be under the active management of a most wise and designing principle or cause; so that it seems to me repugnant to place intelligence and activity in or derive them from different principles; I can have no notion of action without volition. For if you suppose a blind principle of action in matter, you must still suppose it under the over-ruling force of an intelligent and designing principle. And, as it is not the part of a philosopher to

multiply beings and causes without necessity, it seems plain to me that we ought not to imagine any other principle of action than the principle of intelligence, which we know from our own soul has, and in nature must have, a power of self-exertion and activity. We must come to it eventually in our inquiries and I see not how we can avoid admitting it immediately as soon as ever we begin to inquire after efficient causes. For my part I can find nothing but what is merely passive in any immediate object either of sense or imagination, and must therefore conceive of what is called matter to be no more than a mere passive instrument or medium acted by the one principle of intelligence and activity. Thus I say things appear to me; nor can I with the utmost force of mind that my capacity will admit of, conceive of things any otherwise. After all I do not see that my way of defining things affects your ingenious performance considered as a physical essay. If there be any difference in our thoughts divested of all words, as perhaps there is none, it is, as I apprehend, not of physical, but rather of metaphysical consideration. But be it how it will, I am not tenacious, and submit the whole to your better judgment, and remain,

Sir, Your most obliged friend,
and very humble servant,

Samuel Johnson.

P. S. I have a little piece of morals in the press of which I will send you a copy as soon as I receive any, and with it Dr. Berkeley's tract *De Motu*, which will explain what I take to be the justest way of speaking of these subjects, better than I can do.

EXTRACT FROM LETTER OF CADWALLADER COLDEN TO SAMUEL
JOHNSON. Nov. 19, 1746.

I shall add something on this occasion, in defense of my system, that from it a certain proof may be given of the evidence of spirits, or immaterial beings. For as in the idea of all immaterial beings, quantity or shape or form is included, and their actions are all divisible into degrees or quantities of action; the being from whence thinking proceeds cannot be material, because no kind of quantity enters our conception thereof, neither can any kind of measure or division be applied to it, so much as in imagination.

All allow that when God created matter, He gave it some essential property; otherwise there can be no essential difference between

matter and spirit, and why may not I say, in my way of speaking, that God gave at the creation to different kinds of matter, different and distinct kinds of action. As to my part, I can discover no kind of ill consequence in the one more than in the other.

In answer to your demand of my opinion of Dr. Berkeley's book *De Motu*, I shall give it with the freedom requisite to philosophy. I think that the Doctor has made the greatest collection in this and his other performances, of indistinct and indigested conceptions from the writings of both the ancients, and the moderns that I ever met with in any man's performances; that he has the art of puzzling and confounding his readers in an elegant style not common to such kind of writers; and that he is as great an abuser of the use of words as any one of those he blames most for that fault. I hope you will pardon me for writing so freely of your friend, and of so great a man. I do it with the less concern in hopes thereby to provoke you to use the same freedom with me. Compliments without sincerity spoil all philosophy.

I am so often interrupted at this time with business, and which I wish I could avoid, that you must excuse the incoherence of this scrawl, and likewise that I say nothing on the subject of your treatise. I will do it when I can apply my thoughts to it in the manner you desire. I must still stay some days on business in this place, which deprived me of that pleasure which I had hoped to obtain in old age; that is, free thoughts and conversation with my friends on philosophy.

CADWALLADER COLDEN TO SAMUEL JOHNSON. JAN. 27, 1747.

Coldenham, January 27, 1746/7.

Rev. Sir:—

In my last I told you how much I had been involved in the public affairs, that I had not been able to consider your new *System of Morality* with the attention which I designed to give to the reading of it, and which it truly deserves. Nothing has been a greater injury to true religion than the pretenses that some people have set up that religion is not the object of the understanding, but is merely founded on authority, for in such case it could not with any propriety be designed for the use of an intelligent being, and there are no means left to distinguish between true and false religion when we are not allowed to use our understanding in form-

ing our judgment, and the false may set up as strong pretenses to authority as the true, and in fact always does.

You have by your performance clearly evinced the contrary of this, that true religion is founded on the reason or nature of things, and you have shown this in a manner adapted to common capacities and the commonly received conceptions, which makes it more generally useful and the more valuable.

I have considered the same in my own *Principles of Natural Philosophy*, and I have done this for two reasons: viz. thereby to remove some metaphysical objections which you made to my principles, and which I hope by this method to remove more easily than by a direct answer; the other reason is in hopes to give you some hints which may perhaps be of use to you in reconsidering your subject, as you tell me that you intend to publish a second edition of that work. I hope you will give me your sentiments with the same freedom that you see I write to you, and thereby I shall judge that the freedom I take is not disagreeable to you. I have no other view but truth, and for that reason I shall myself be more obliged by having my mistakes shown to me than by any applause. I am, Sir,

Your most humble servant,

Cadwallader Colden.

TO CADWALLADER COLDEN. APR. 15, 1747.

April 15 [1747]

Sir:—

I have been so much taken up of late in several journeys and various other affairs, that this must be my apology for not sooner answering your kind letter of January 27. Your beautiful little draught of the *First Principles of Morality* is what I have been very much pleased with; I have read it with attention three times, and every time with a fresh increase of pleasure, and now at length return my hearty thanks for it, and for the candor you express towards the piece I had the presumption to publish. You have in this little piece of yours made such an easy, gradual, and natural progress from physics to metaphysics, and from thence to morality, as is very pleasing to the mind; and I think, if I rightly apprehend, you have now so explained yourself that we do not much differ, and what difference yet remains I believe is but merely verbal. My

chief object' was against your using the term *action* as expressing anything in matter, which I take to be a mere passive thing, and that action cannot in strict propriety of speaking be attributed to it; for which reason that expression still grated upon my mind till I came to your 7th section, in which, when you come to explain the difference between spirit and body, you say "the actions of the latter are altered by efficient causes *always* external to themselves."

This seems evidently to conclude what I would be at, and that at the bottom we think alike, *viz.* that when we speak of matter and the action of it we use that word for want of a better, in a sense rather figurative than literal, and understand it in a vulgar sense rather than a sense that is strictly philosophical, [as we] do the rising and setting of the sun. So we may call writing the action of the pen, when it is only in reality merely acted [on], and consequently that by the action of matter you do not mean any exertion of its own, much less a designed conscious self-exertion which always enters into my notion of efficient causes; and that therefore when you say it is *determined* by the (exertion I would say of) *efficient causes always* external to itself, those efficient causes must always be self-exerting and intelligent beings *i. e.* spirits, which therefore only are properly agents, and consequently that all the actions in all nature that affect our senses and excite ideas in our minds are really the actions of that great, supreme, almighty being or spirit whom you call (25) *the soul of the universe*.

I do not, with Sir Isaac in section 9, quite like that expression. It may however be admitted, if it means that he animates and governs the world as the soul does the body, which is merely passive to it: it is so far right, — he being in this sense the natural governor of the natural world; but this seems not sufficient unless you also conceive him as the moral governor of the intelligent or moral world, rewarding or punishing men according as they behave, — which is what I would apprehend you to mean by the real words.

You say very truly, section 9, *we have no idea of matter*; by which it is plain that by matter you mean something that is not the object either of our senses or minds. Of what use then is it in philosophy? Why may we not wholly drop it, and do as well without it, perhaps much better, and suppose what you call the action of it to be the action of that Almighty Spirit in whom we live, move, and have our being, and consider all nature as being the glorious system

of His incessant exertions and operations, with which by His own action governed by fixed rules of His most wise establishment called the laws of nature, He perpetually and with endless variety of objects affects our senses and minds. This will sufficiently account for everything, whereas matter whereof we have no idea, can account for nothing.

You use the expression, sections 20 and 21, *during the time of our existence*, which sounds as though it was to have a period with this vain life. This I cannot suppose your meaning (and therefore might perhaps be better left out), because I apprehend you must think it evident from the wisdom, justice, and goodness of God, compared with that excellent nature He has given us, that we must be designed for nobler ends than can be answered by our existence only in this short, uncertain, and troublesome life. Thus, Sir, I have used the freedom you desire, and which I doubt not you will take in the same good part, and with the same pleasure as I do yours, and always shall. I am glad to find by your "Gazette" that you are at last resolved to have a college in your government. This is what I doubt not you have much at heart, and I heartily wish success to it, and shall be glad to correspond with you in anything in my little power that may tend to promote it, and wish it may take effect speedily that you may not suffer the Jersey College (which will be a fountain of nonsense) to get ahead of it.

I am, Sir, etc.

S. J.

CADWALLADER COLDEN TO SAMUEL JOHNSON. MAY 18, 1747.

New York, May 18th, 1747.

Rev. Sir:—

Yours of the 15th of last month, in which you express some satisfaction in the little rude sketch I sent you on the first principles of morality, gave me a good deal of pleasure, though I cannot be fully clear that either of us has received clear conceptions of the other's thoughts. But in the first place I must thank you for your taking notice of some expressions in my paper liable to exceptions. I own they are justly so, but as what I wrote was only for your private amusement, and to obtain your opinion on my thoughts, I did not much attend to the accuracy of expression.

I did not think of the old opinion of the soul of the world when

I wrote that paragraph. My design was only to avoid all expressions which could raise any idea of matter or corporeity, as the word spirit in its natural signification is apt to do, and for that reason only I made use of the words soul or mind. Please then to put in their place *infinitely intelligent being*. It was by the same inadvertency the words, *during the time of our existence*, were made use of, and I am obliged to you for the correction which you have made of them.

But now to come to the matter itself, I cannot have any idea of anything merely passive or without any kind of action. I can have no idea of a mere negative, and since, as I observed, all our ideas of everything external to us must arise from the actions of those things on our minds, everything of which we have any idea must be active. This is my fundamental argument, to which I suspect you have not given sufficient attention; and from whence I conclude that all matter is active. You seem likewise not to have alluded to the distinction which I make between the substance and the action of that substance. We have no idea of the substance of intelligent beings, as little as of material. We have only ideas of their actions. Or, the ideas are the effects of their actions on our minds. But, Sir, if you attribute all action immediately to that *Almighty Spirit in whom we live, move, and have our being, all nature* (as you say) *being a system of His incessant exertions, etc.*, I do not see how any thing or action can be morally evil in a proper sense, and the foundation of morality seems merely to be sapped. It seems to be a kind of Spinozism in other words. But as this is inconsistent with the whole tenor and end of your treatise I can only conclude that I have not been able to form any conception of the first principles of your and Dr. Berkeley's system of philosophy. I am afraid you will find me of a much duller apprehension than you at first imagined, and that if you are willing to make me understand your system, it will give you more trouble than perhaps anything that can be expected from me on the subject, can deserve.

The public affairs have employed my time so much that I cannot write more fully at this time on this or any other subject, and I must desire that the same excuse may serve for my not answering your letter sooner. But if you be at more leisure, a line or two from you will be exceedingly agreeable to me, that I may know whether I have been so lucky as to explain anything to your satisfaction, or

to free me from my mistakes. I hope soon to be freed from these clogs to the pleasantest amusement in old age, and to have time to show how much I am, Sir,

Your most obliged humble servant,
Cadwallader Colden.

TO CADWALLADER COLDEN. JUNE 7, 1747.

June 7. [1747]

Sir:—

Could you be sensible of the manner of life I am obliged to live, I should have little occasion to make any apology for my being so long before I answer your obliging letters, and especially your last of May 18, for which I now return you my sincerest thanks; or for my incorrectness of expression when I do write, which doubtless is the chief occasion of my not being clearly understood, as well as of my not sufficiently attending to what you write. For my case is not altogether dissimilar to that of the great Apostle, particularly in being in journeyings often and in perils among false brethren.

I am entirely satisfied and well pleased with the amendments you allow me to make in the ingenious draught you were so good as to send me of your notion of the first principles of morality; with which it now runs clearly to my mind and is equally pleasing to my friends here, to whom I have communicated it. As for the incidental turn I made upon an expression of yours in favor of Bp. Berkeley's system, I was little more than jocular on that occasion, being not dogmatically tenacious of his peculiar sentiments, much less zealous of making you a proselyte to them. I would however observe that you have made a considerable approach towards them, at least as far as I am concerned to wish you to do, particularly in your allowing that all our ideas of sensible things are the effects of the actions of something external to our minds, and that even resistance is an action. Your supposing an active medium which you call matter intervening between the action of the Deity and our minds perceiving, to which they are immediately passive, though I am not clear in it, does not affect me so long as you allow all action throughout all sensible nature to derive originally from Him.

I doubt I expressed myself sometimes uncouthly, at least very incorrectly, otherwise you would not have inferred from what I

wrote that ¹ attributed all action immediately to the Almighty Spirit. I meant only all the actions in sensible nature only, or which produce in our minds the ideas of sense and imagination; but I was far from meaning that there are no other actions besides those of the Deity. For this would be in effect to deny or doubt whether there be any other beings besides Him and our ideas. This would sap the foundation of morality sure enough, and would be at least as bad as Spinozism. Bp. Berkeley any more than I, never doubted of the existence or actions of other inferior created spirits, free agents and subject to moral government. All he contends for is that there are no other than two sorts of beings, the one active and the other passive, — that spirit, the Deity, and created intelligence alone are the active beings, and the objects of sense alone are merely passive; and that there is no active medium intervening between the actions of the Deity and our minds whom He has made to be perceptive and self-active beings. These I take to be the first principles of his system. But however at a loss you may be about his peculiar system, there is a very pretty book published in England in 1745, called *Dialogues Concerning Education*, being a plan for training up the youth of both sexes in learning and virtue, which I have lately seen, and long to have you read; and in which I don't doubt we should perfectly agree. I have recommended it to Mr. Shatford of New York to procure several copies, and do not think we could put a better thing into the hands of our children. It is the prettiest thing in its kind, and the best system both in physical, metaphysical, and moral philosophy, I have ever seen.

[Samuel Johnson]

CADWALLADER COLDEN TO SAMUEL JOHNSON. DEC. 20, 1752.

December 20, 1752.

Sir: —

I sometime since received your book which Mr. Nicholls told me you was pleased to send me. Since that time my thoughts happened by several incidents to be so much engaged that I could not write to you in the manner I inclined to do, and they continued so when I sent you the *Principles of Action in Matter*, about ten days or a fortnight since. I had at that time just received three copies of it from England, and had only time to run it cursorily over to correct

the most obvious errors in the press, which happen to be numerous. I know we (you and I) differ in the fundamentals of that essay, and for that reason I expect from you the strongest arguments that can be brought against it, and therefore, if I am under an error, you are the most capable to set me right, and I assure you that I have that esteem of your judgment that I unwillingly differ from you. Pray then, Sir, let me have your objections to those principles with that freedom that ought always to subsist in philosophical inquiries.

In the sixth page of your *Noetica*, you say our perceptions cannot be produced in our minds *without a cause* (so far we agree); or, which is the same thing, by any *imagined, unintelligent, inert, or unactive cause*. I likewise agree that an unactive cause and no cause are synonymous; but I am not convinced that intelligence is an essential concomitant to all action, for then I could not conceive the action of a mill without supposing it endowed with intelligence. You seem likewise to think that the words *inert* and *unactive* are synonymous. Sir Isaac Newton was certainly of a different opinion, as appears by the third definition in the beginning of his *Principia*, viz., *Materiae vis inertia est Potentia resistendi*, etc. We certainly can have no conception of force or power devoid of all kind of action. Now, Sir, these are fundamental differences. One of us must be under a very great mistake, and if you incline to write with the same freedom that I incline to think on these subjects, I hope we shall not continue long of a different opinion. Inert in common discourse is often synonymous with unactive, but I take it in the sense that philosophers of late use the word inertia when they say *vis inertiae*, which certainly cannot mean mere inaction. I shall say nothing more on these matters of speculation, that I may pass to a subject of more immediate concern.

It gave me a great deal of pleasure when Mr. Delancey resolved to send his children to you for their education in learning, as I am confident they will thereby imbibe principles which will be of the greatest use to themselves and to their neighbors in whatever course of life they shall afterwards take to. I am under little concern as to their learning languages, or as to their skill in what may be called the learned sciences, but I am earnestly desirous that they have the true principles of good manners early implanted in their minds; to have their affections always moved by universal benevo-

lence, and to have a true sense of honor wherein it really consists. It is from you that I hope they will receive these great advantages, of which they will find the benefits in every station of life and in all emergencies or turns of fortune. These I beg you will again and again explain to them and never cease to inculcate upon their minds. As it is not determined what course of life any of them shall pursue, it may be best to instruct them in such parts of learning as will be of use in every station. I think knowledge in geography as useful as any other part for these purposes, especially the modern geography with an account of the present state of the kingdoms and republics in Europe and of the great monarchies in other parts of the world. Peter, in a letter he wrote to me from West Chester, tells me that he inclines to study Divinity and to fit himself for that study with you. I shall be far from diverting these thoughts, because he may be as useful in that way as in any, and the more so that few of any distinguished families in America apply themselves to the Church. His applying to it may (if others follow his example) prevent a contempt of the character which otherwise may in time be produced. For this reason I do not doubt but the bishops in England will think it for the interest of the Church to encourage any young gentlemen in America who shall turn their thoughts that way from worthy principles.

I had thoughts of writing to my grandchildren, but I have said all to you that I had in my thoughts to write to them, and therefore if you think proper you may communicate it to them and remember me affectionately to them and tell them that we are all in health. I hope to hear often from you. Mr. Nicholls will take care of your letters.

I am affectionately, Sir,

Your most humble servant,

Cadwallader Colden.

January 29, 1753.

The river being full of ice has deprived me of any opportunity of sending this letter till now. We continue in health. Remember us again to the children. Their grand-mamma, uncles and aunts all join with me,

Yours

C. C.

TO CADWALLADER COLDEN. FEB. 19, 1753.

February 19 [1753]

Sir:—

I sent you that book without any imagination of its being worthy your perusal. I only meant it as a testimony of my humble respect and gratitude, though not without my wishes that so far as you should condescend [to] cast your eye upon it, if you see anything that might much tend to mislead youth in the entrance of their studies, for whose use it was written, you would be so good as to intimate it to me. I now return you my humble thanks for your very ingenious performance and this kind letter upon it. I have perused it with some care, though I have not yet had it long enough to spend so much thought upon it as I intend. I am glad to see the whole of it published, and doubt not but it will be an acceptable present to the public, and must own that now I see the whole of it together, it appears to me in a much more advantageous light than that piece of it did before, and do not think we differ so much in the principles you set out with as you seem to imagine. I do not differ with you at all, considered as a natural philosopher, which is the light in which you are principally to be considered in that treatise. For it is evident there are those three distinct principles of action in nature you go upon, — media or endings of action I should call them as a metaphysician, referring the same origin of them to the one great principle of natural discovery and action; but which you as a natural philosopher — as such going no higher — do very well to consider as distinct principles. The principle of resistance of motion and of elasticity — and the contemporative (if I may so speak) of those principles in their various exertions and operations you seem to have happily demonstrated — will well account for the phenomena, and as to what is metaphysical in your treatise, I think you have explained yourself to my satisfaction in your chapter of the Intelligent Being, section 10 — where you allow the Intelligent Being to be the real author of all material (I should call them sensible) beings, and to govern or direct their actions in such a manner as is most conducive to the advantage of the whole, which you rightly deduce from the power of our minds over the ether in the nerves which we observe to quiesce till put in action by our hands. The reasons indeed we know not, but it is the fact.

So that I believe what we seem to differ in, if at all, will amount

to little more than words. I agree with you in saying, "we can certainly have no conception of force or power devoid of all kind of action," and when I do so, it seems to me that you must with me allow that Sir Isaac's *vis inertiae* is a contradiction in terms, and that that great man, in that definition and the explication of it, has some expressions that have no meaning; for I must think it is plain that by inertia (as in Ovid, *pondus iners*) the old Romans meant an utter destitution of any principle of activity *in se*, or power of self-exertion or action, terminating on anything without, and I don't see what right he had to use or define it in a quite contrary sense; at best his expressions are figurative.

As to that question whether the same being that is the principle of action must as such be also a principle of intelligence, I have nothing to say for it more than I said in a former letter, that it seems to follow from that principle "*Non est philosophia externi multiplicare sine necessitate*," and that a blind principle or power of action without intelligence seems repugnant and useless. However it seems a question of little real consequence, or indeed of scarce any meaning after what you allow in the chapter of the Intelligent Being, the action of what you call matter being according to you derived originally from and directed by the Intelligent Being. And so matter is no more than merely His instrument, so that what you call the action of a mill or watch is really only a successive series of passions till you come to the principle of intelligence, which will ultimately prove to be also the principle of the action.

That expression of yours, page 164, "that perfect intelligence will not act in contradiction to the action of matter," I should have chosen to express thus: will not in the settled course of things act in contradiction to the laws He hath established according to which He wills matter to act. For I cannot conceive you to imagine the action of matter to be independent of the divine will. I rather imagine from other passages that you do with me conceive it to be entirely dependent, as well as matter itself, on the constant free exertion of the divine will and power.

I don't deny, Sir, but that I am yet a little in the dark about the operations of that elastic fluid by which you account for gravitation. I should scarce ever say that there should be a perpetual return of the ethereal fluid to the sun as well as a perpetual flow

from it, agreeable to Mr. Hutchinson's notion, who imagines a perpetual circulation of it from the sun, and after a kind of condensation of it at the utmost bounds of the system, a reverberation and return of it to the sun again; so that according to that great man the effects of gravitation, circular motion, and rotation, will be the result of the struggle between those contrary tendencies. This being supposed, you and he seem well to coincide. I wish you had opportunity, if you have not had, to read his system with some attention and exactness, if not in his works, which are something tedious, at least in that beautiful short sketch of them set forth by your excellently great and good countryman, Lord President Forbes, in his "Letter to a Bishop and Thoughts on Religion." But what you call the different principles of light and ether, he supposes to be the one ethereal fluid or fire of the sun in the different conditions of light and spirit as it flies from or returns to its fountain. Perhaps your notion and his may come nearly to the same thing. The Abbé Pluche of France, as well as he and Bp. Berkeley, agree that this ethereal fire is the light and life of the whole sensible world, and grand agent in all nature, or the immediate engine from whence all the phenomena mechanically derive: and that this was the original philosophy of Moses and in all the Hebrew Scriptures, and taught mankind from the beginning. And I am pleased in thinking that your demonstrations and Mr. Franklin's experiments illustrate and confirm it to be the only true and genuine philosophy. Pardon, Sir, my incoherent and rambling way of writing. I hope you may pick out my meaning. I would transcribe, but my care of your grandchildren and other duties will not admit of time for it.

As to your grandchildren, I have the same notion of education with you (my plan you may see in my 6th chapter), and do not fail, as you desire, to inculcate those principles you mention as far as I am able. And besides the moral and classical part (in which they have almost finished "Cornelius Nepos" and two thirds of "Justin"), I have gone over and explained a short history of England and a short geography you gave them, and am now going over a short system of universal history and chronology, and point out to them in maps the ancient geography of the classics as well as the modern. But they have (the eldest especially) such a violent impetuosity to their play that I find it exceeding difficult to gain so strong an attention as I could wish to their books and studies. They

seem well cut out for business, as farming and merchandise, but Peter has an excellent turn for learning, and it is a pity but he should go through an entire course of education. As to what he wrote to you, I am exceeding glad his dispositions are such and that you approve of them, and agree with you and thank you for your remark of the vast importance to religion and the public weal that any of distinguished families should apply themselves to Divinity. Mrs. Delancey first mentioned it to me, and I ventured to encourage it and shall henceforward encourage myself to hope that your daughter has borne, and that I am educating one who, in God's time, may become a bishop in America. I communicated your letter to them, and inculcated it. They send their humblest thanks and duty to you and their grand-mamma and uncles and aunts. They have had an uninterrupted course of perfect health.

I cannot take leave without giving you my humble thanks for the favor you have done me in the good character you gave of me in your account of pokeweed, etc., which was published in the "Gentleman's Magazine," and wish I may deserve it. I have since heard of several others of the eating cancers cured by it, but a man in this town has a strange sore on his legs they call a heaving or gnawing cancer, on which it was tried without success; and both cutting, burning, and several caustics have since been tried, which have only made it grow the faster, and it is now larger than the hand can cover, and is like to cost the poor man his life.

I am, Sir, your most obliged humble servant,

S. J.

PART IX

THE GROWTH OF SAMUEL JOHNSON'S
INTRODUCTION TO PHILOSOPHY

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AN OUTLINE OF PHILOSOPHY

PHILOSOPHY is the Love and Study of Truth and Wisdom; *i. e.*, of the objects and rules conducive to our true happiness.

And it consists of three parts:

Rational which cultivates our rational powers, enabling us to find out and communicate the truth in

LOGIC, the art of reasoning;

GRAMMAR, of speaking; to which

RHETORIC, of persuading.

HISTORY, of narration.

POETRY, of description.

Natural which teaches the truth of things, *i. e.*, their true natures that we may know how to conduct ourselves, and all nature consists of:

1. IDEAS, certain combinations whereof we call *bodies*, the nature whereof is taught in

MATHEMATICS, of number and measure.

PHYSICS, of the phenomena and laws of motion and gravitation, etc., and the knowledge of the earth and its inhabitants.

ASTRONOMY, of the system of the universe.

2. SPIRITS, the nature whereof is taught in

METAPHYSICS and THEOLOGY.

Moral which consists in the application of that knowledge to practice.

in ETHICS, of our duty to God, our neighbor and ourselves. But with respect to Theology and Ethics God has given a particular supernatural revelation of His mind and will for our direction.

A General Idea of Philosophy.

PHILOSOPHY is the study of truth and wisdom, *i. e.*, of the objects and rules conducing to true happiness.

For to be happy being our great aim and chief good this is the chief end of philosophy.

And this is the end pursued in all the arts and sciences which are only so many means of our happiness.

For that we may be completely happy, both our understandings and wills must be united with their proper objects, truth and goodness, and directed in their exertions in order hereunto.

To this purpose philosophy (1st) teaches us to cultivate our rational powers of thinking and speaking, that in the right use of them we may know the truth and (being sociable creatures) may communicate our knowledge one to another; this may therefore be called *rational philosophy*.

(2) Philosophy instructs us in the knowledge of things, *i. e.* all the truths that concern us, as being the objects in the knowledge of which a great part of our happiness consists;—this is called *natural philosophy*.

(3) Philosophy teaches us from this knowledge of things, the rules of behaving ourselves, *i. e.*, choosing and acting in such a manner as will make us completely happy; and this is called *moral philosophy*.

The two first of these beautifies the understanding and the third the wills and affections.

1. Rational philosophy teaches us to cultivate our rational powers of thinking and speaking, in logic, grammar, and critic—

1. In logic, by leading us into our own minds and giving us a survey of their several powers and their objects, and prescribing such general rules as may happily secure us from error and lead us to the knowledge of truth.

2. In grammar and critic by teaching us, according to the several languages, how to express the truth we know, and communicate intelligibly the sense of our own minds to others.

But because speech is various according as it serves several different purposes, there are several other arts relating to it, as

1. Rhetoric and oratory, which teach us to cultivate and adorn our speech for the purposes of instruction and persuasion.

2. History, which teaches us to compose a just and true narration of matters of fact, for examples to posterity.

3. Poetry, which teaches us to make a lively description of either things or facts whether real or imaginary, with the advantages of numbers and harmony, for the better conveying and more strongly fixing in our minds, the most profitable instructions with the utmost delight and pleasure.

II. Natural philosophy instructs us in the knowledge of things, whether ideas or spirits, for to these two heads all things may be referred, hence physics and metaphysics.

1. Certain combinations of ideas we call bodies, and that part of natural philosophy which explains the nature of bodies is called physics. Which

(1) In mathematics teaches us to number and measure. And

(2) In mechanics, it explains the laws of motion, gravitation, etc.

(3) In geology (if I may make a new word), it takes a survey of and explains all the phenomena of nature in the several tribes of beings in this globe of earth, and lastly

(4) In astronomy it passes off from this globe and contemplates the system of the universe, describing and accounting for the phenomena of the heavens.

2. Intelligent and active beings are called spirits, and that part of natural philosophy which treats of the nature of spirits is called metaphysics, or pneumatology, which

(1) Treats of the nature and powers of our own souls, and then

(2) Inquires concerning other tribes of intelligences, and

(3) Of the nature, attributes and operations of God, the supreme and almighty Spirit, who made, preserves, and governs all, in whom are the archetypes of all our ideas, and who is the father and original of all created spirits. (This is called theology.)

III. Moral philosophy, from this knowledge of things, and especially that of spirits, teaches us how to behave and conduct ourselves, to choose and act in every relation, so as to be truly happy. Particularly it teaches us the rules of our behavior

1. Towards God: our maker, preserver, and governor, who is our chief good.

2. Towards our neighbors, other spirits of the same nature with ourselves.

3. In the government of ourselves, our reason, appetites, and affections, and this is called —

Ethics, to which belongs politics.

But because some parts (especially the second part) of natural philosophy, and the whole of moral philosophy, are of the greatest concern to us, God has, of his special kindness to us, given us relating to them a particular and express revelation of his mind and will, and how we (having offended Him) may yet secure his favor, through the mediation of his Son.

Here therefore belongs the Christian philosophy which is only theology and morality more clearly and perfectly revealed to us, and improved by positive intimations of the Divine Will in those things wherein natural reason did not suffice to instruct us. This divine revelation, therefore, must be called in to our assistance in all those parts of philosophy whether natural or moral, wherein God is pleased to hold forth any light unto us.

EXCERPTS FROM AN INTRODUCTION TO PHILOSOPHY¹

AN / INTRODUCTION / TO THE *STUDY* OF / PHILOSOPHY / Exhibiting a General View of all the / ARTS AND SCIENCES, / For Use of Pupils. / With a CATALOGUE of some of the most valuable Authors, / necessary to be read, in order to instruct them in a / thorough Knowledge of each of them. / *O Vitae Philosophia Dux! O Virtutum Indagatrix, Ex- / pultrixque Vitiorum! Unus Dies bene et. ex Prae- / ceptis tuis actus, peccanti Immortalitati est ante- / ponendus! Cic. Tus. Quaest. Lib. 5. — / Quod si cuique Scientiae Provincia sua tribuatur, Limites / assignentur, Principia et. Objecta accurate distin- / guantur, quae ad singulas pertinent, tractare licuerit, / majore, tum, Facilitate, tum Perspicuitate. / D. Berk. De Mot. / LONDON: / Printed for J. RIVINGTON, at the Bible and Crown / in St. Paul's Church-yard. MDC-CXLIV. / (Price Six-Pence.) /*

¹ The body of this work is not published here, since it is similar to later works by the same title. That this is not the first printed edition appears from a notation by Samuel Johnson on his copy as follows: "The *Second* Edition enlarged: The first having been published at London in the *Republic of Letters* for May in the year 1731. Art. XXXVII."

A manuscript without date is probably the original for this earlier edition. We publish below an "Advertisement" from it, which is not to be found in the 1744 edition.

On the next to the last page of the manuscript is the following: "N. B. All the above mentioned catalogue of books are either to be had at the shop of Th. Cox, at the Sign of the Lamb near the Town House in Boston, or shall be sent for to England for any gentleman that desires it." And on the last page is Johnson's table of the divisions of philosophy in the form of a tree. It differs from the table in the text only in that the soil out of which the tree of philosophy grows is labelled "Truth."

Otherwise the changes made in the text for the 1744 edition were largely in the direction of giving the work greater dignity and polish of style.

In his own copy of the 1744 edition, Samuel Johnson inserted a number of additions to the Catalogue of Authors; none, however, of special significance, except that many of the additions occur under "Medicine."

From the 1744 edition only "The Table" and the "Catalogue of Authors" are here published. [The Editors.]

ADVERTISEMENT ²

But before I proceed there is one thing I beg leave to mention as a thing of very great importance, and wherein we in this country are for the most part sadly defective; and that is, what is called the *classical learning*: i. e., the study of the ancient Greek and Roman orators, poets, historians and moralists. And I do earnestly wish for my country's honor and improvement, that the young students of our schools and colleges would apply themselves with the utmost zeal and diligence to retrieve their reputation, which very much suffers upon this account, for till they do this, they will always be of but small account in the eyes of the learned and polite world, who have ever made this sort of learning their favorite study and put the greatest value upon the venerable remains of the ancient Greek and Latin writers, which have been the wonder and delight of all ages, who studied nature more and understood it better than any nations have ever done since, and whose languages, indeed, were capable of many beauties and advantages which never could be imitated by or copied into any modern languages whatsoever.

We do indeed attain to some little smattering in a few of the Latin classics; but as to the Greek, which are the most valuable, we are for the most part scandalously ignorant of them. And while we are so, must needs be despised by all that understand wherein true politeness and a good taste consists. *Grævis Ingenium, Grævis dedit ore rotundo, Musa loqui*, says Horace. *Vos Exemplaria Græco Nocturna versate manu, versate diurna*. This was that polite Roman advice, and it was by this means that he and all the other fine writers of the polite Augustine age advanced their language to such a perfection and rendered themselves immortal and examples to all posterity. Let us, therefore, take his advice, try to awaken a laudable spirit of emulation, and earnestly endeavor to improve ourselves in these studies, and not lazily hang back under the apprehension of imaginary difficulties and sit down in a mean contemptible ignorance of what it so much concerns us to be acquainted with, if we would enrich our minds with the best and politest furniture, or expect to deserve the notice of the learned world abroad. It will, indeed, cost us some study and pains to master these noble ancient writers; but let not this discourage us, it is a better saying, *difficilia quæ pulchra*. We may depend upon it we shall be abun-

² Taken from the earlier manuscript. [The Editors.]

dantly rewarded in every step we take both by the pleasure and advantage we shall reap thereby.

Would our colleges be obstinately bent in a resolution not to admit any but such as have attained to a good competency of knowledge in several of the best Greek as well as Latin classics, at least such as would enable them to begin to have some taste in the orators, historians and poets of each language, and would the schools be unanimously engaged in endeavoring to answer their expectations, I say, would all be agreed and resolved to act in concert in this affair for the remedy of so scandalous a defect and the advancement of so great a good, and all be inspired with an eager thirst to drink *ex ipsis Fontibus*, I should not despair of seeing true learning flourish among us. For nature doubtless makes as good geniuses here as in any other parts of the world, and nothing is wanting but a regular education to polish and cultivate them, that they may exert and display themselves and appear to the best advantage.

PHILOSOPHY is the Study of Truth and Wisdom, in the Pursuit of true Happiness. And it is to be divided into THREE PARTS.

THE TABLE

- I. RATIONAL; which teaches us to cultivate our *Rational Powers*; viz.
 1. *Reason*, in *Logic*; to which are referred *Ontology* or *Metaphysics*, and *Dialectic*.
 2. *Speech*, in *Grammar* and *Rhetoric*; to which are referred *Oratory*, *History*, and *Poetry*; and, to all of them, the *Art of Criticism*.
- II. NATURAL; which teaches the Knowledge of the *Natural World*, and the Practices thereon depending; being therefore partly *Speculative*; and partly *Practical*; and is,
 1. *General*; which treats of *Quantity*, *Bodies*, and *Motion*, in general, in *Mathematics* and *Mechanics*.
 2. *Special*; which explains and accounts for all the *Phenomena*, both in *Heaven* and *Earth*, in all the Parts of *Physics* and *Astronomy*.
- III. MORAL; which teaches the Knowledge of the *Moral World*, and the Practices thereon depending; being partly *Natural*, and partly *Revealed*; and is,
 1. *Speculative*; which contemplates the Nature of *created Spirits*, and of GOD, the *Creator* and Lord of all Things, in *Pneumatology* and *Theology*.
 2. *Practical*; which teaches the Practice of what is necessary to our complete Happiness, both here and for ever, in *Ethics*, *Economics*, and *Politics*, both Civil and Ecclesiastical.

A CATALOGUE of some of the most valuable Authors on each Part of PHILOSOPHY, proper to be read by the Students.

I. IN RATIONAL PHILOSOPHY.

1. On *Logic* and *Metaphysics*, read *Ars Cogitandi*, *Le Clerc*, *Watts*, *Locke*, *Crousaz*, *Medicina Mentis* by *Welstead*, *Lord Bacon*, *Locke's Conduct of Understanding*.

2. On *Grammar*, besides the usual *Grammar*, read *The Oxford Grammar*, *Rudiman's*, *Clarke's*, *Vossius's*, *Whettenhall's*, and *Busby's Greek Grammars*; *Bennet's*, *Schickard's* and *Buxtorf's Hebrew Grammars*; and *Brightland's English*, and *Boyer's French Grammar*.

3. On *Rhetoric*, read *The Art of Speaking*, *Smith*, *Farnaby*, *Quintilian*, *Longinus*, *Dionysius Halicarnass*. *Tully's Orator*, and his and *Demosthenes's Orations*; *Archbishop of Cambray* on *Eloquence*.

4. On *History*, read *Hearn's Ductor Historicus*, *Eutropius*, *Florus*, *Cornelius Nepos*, *Justin*, *Caesar*, *Tacitus*, *Suetonius*, *Sallust*, *Livy*, *Xenophon*, *Herodotus*, *Polybius*, *Lucian*, *Plutarch*, *Thucydides*, *Diogenes Laertius*, and other *Historians* and *Biographers*: *Strauchius's Chronology*, and *Cellarius' Geography*, and *Gordon's* and *Moll's Geography*.

5. On *Poetry*, read *Temple*, *Addison*, *Roscommon*, *Phaedrus*, *Ovid*, *Virgil*, *Horace*, *Martial*, *Terence*, *Seneca*, *Juvenal* and *Persius*, *Lucan*, *Lucretius*, *Hesiod*, &c. *Poetae minores*; *Homer*, *Sophocles*, *Euripides*, *Pindar*: and of *Moderns*, *Shakespeare*, *Milton*, *Dryden*, *Pope*, *Swift*, *Thomson*, *Gay*, *Young*, etc., *English Poets*; and *Boileau*, *Cambray's Telemachus*, etc.

6. On the *Art of Criticism*, read *Le Clerc's Ars Critica*, *Pope's Art of Criticism*, *Rollin's Belles Lettres* and *History*, *Rapin's Critical Works*, *Felton* and *Blackwall* on the *Classics*, *Blackwall's Sacred Classics*; read also *Kennet's Roman*, and *Potter's Greek Antiquities*, and *Took's Pantheon*, or *King's Heathen Gods*.

II. IN NATURAL PHILOSOPHY.

1. On *Mathematics*, read *Ward's Young Mathematician's Guide*, *Euclid's Elements* by *de Cales*, *Barrow* or *Sturmie's Mathesis Juvenilis*, or *Ozanan's Cursus Math.* *Harris* or *Cunn's Trigonometry*; *dela Hire's*, or *Steel's*, or *Hospital's Conic Sections*; *Sir Isaac Newton's Universal Arithmetic*, and *T. Cassel's Mathematics*.

2. On *Mechanics*, read, *Keil's* Introductio ad veram Physicam, *Gravesand's* Mathematical Elements, Etc. *Desaguliers*, Sir *Isaac Newton's* Principia, or *Whiston's* Mathematical Philosophy, or *Pemberton's* View, etc.

3. On *Physics*, read, for general Systems, *Rohault*, *Le Clerc's* Physica, *de Harnel's* Philosophia Burgundica, *Reginault's* philosophical Conversations, *Spectacle de la Nature*.

4. On *Particular Parts*, read 'Squire *Boyle's* Works abridg'd by *Shaw*, *Philosophical Transactions* by *Lowthorpe*. — On the *Earth*, *Burnet's Tellur. Theor. Sacr.* *Whiston's* New Theory, *Woodward's* Natural History. On *Optics*, *Newton's* Optics & Praelect. Opt. — On *Plants*, *Grew*, *Bradley*, *Hale's* Vegetable Statics. — On *Animals*, *Dionis*, *Keil*, *Cowper*, and *Cheselden's* Anatomy; *Borelli de Motu Animalium*. — On *Medicine*, *Hippocrates*, *Galen*, *Bellini*, *Pitcairn*, *Sidenham*, *Quincy*, *Shaw*, *Fuller*, *Clifton*, *Freind*, and *Morgan's* Principles of Medicine — On *Chymistry*, *Boerhaave*.

5. On *Astronomy*, *Gassendus*, *Watts*, *Wells*, *Keil*, *Whiston's* Astronomical Lectures, *Dr. Gregory's* Elements, etc.

6. On *all Parts*, read, *Harris's* Lexicon Technicum, and *Chambers's* Cyclopaedia. —

III. IN MORAL PHILOSOPHY.

1. On *Pneumatology*, read *Le Clerc's* Pneumatologia, *Locke's* Human Understanding passim, *Wollaston's* Religion of Nature, *Clarke's* Letters to *Dodwell* and *Leibnitz*, *Malbranch*, *Descartes* Metaphysics, *Norris's* Ideal World, Bp. *Berkeley's* New Theory of Vision, Principles of Human Knowledge, Dialogues et Tract. de Motu; Bp. *Browne's* Procedure and Extent of Human Understanding, and divine Analogy; *Shaftsbury's* Philosophical Rhapsody; *Watts's* Philosophical Essays.

2. On *Physico-Theology*, read *Derham's* Astro. et Physico-Theology, *Ray's* Wisdom of God in the Creation, *Cheyne's* Philosophical Principles of Religion, *Whiston's* Astronomical Principles of Religion; *Newentyte*, *Bentley* and others *Boyle's* Lectures.

3. On *Natural Religion*, read, *Wilkins's* Natural Religion, *Wollaston*, *Clarke's* Demonstration, etc. *Cudworth's* Intellectual System, and Foundation of Morality; *Cumberland's* Law of Nature.

4. On *Ethics*, read *Moor*, *Whitby*, *Tully*, *Seneca*, *Epictetus*, *M.*

Antoninus, Hierocles, Boetius, Aristotle, Plato — On *Christian Morals*, read *Kettlewell's Measures of Christian Obedience* — Whole Duty of Man, and his Works.

5. On the *Evidences of Christianity*, read all the ancient Apologists, *Justin Martyr, Athenagoras, Origen contra Cels. Clemens Alex. Tertullian, St. Cyprian, Lactantius, Minutius Felix, Eusebius*, etc. Fathers of the four first Centuries. — And of the Moderns, *Grotius De Ver. Christ. Rel. Stillingfleet's Origines, Jenkin's Reasonableness of Christianity, Clarke's, Kidder's Demonstration of the Messiah, Sykes, Chandler, Smallbrook, Conybeare, Foster, Bp. Berkley's Minute Philosopher, Chapman's Eusebius, Roger's Eight Sermons, Bp. Butler's Analogy*.

6. On the *Scriptures*, read the *Originals and Polyglott London*, and *Poole's Crit. Grotius, Hammond, Patrick and Lowth*, and *Whitby* on the New Testament, *Clarke and Pyle, Henry and Burket*, and *Collier's Sacred Interpreter*.

7. On the *Creed, Articles, and Bodies of Divinity*, read Sir *Peter King, Pearson, Barrow, Burnet, Limborch, Scott's Christian Life, Fiddes's*, or *Stackhouse's Body of Divinity*.

8. On the *Arian and Socinian Controversy*, read *Bull, Lesley, Clarke, Jackson, Waterland, Bennet, Burnet, Watts*, etc.

9. On the *Arminian Controversy*, read *Turretine, Edwards, Whitby* on the Five Points, *Clagget* on the Operations of the Spirit.

10. On the *Episcopalian Controversy*, read *Calamy and Hoadley*, Sir *Peter King*, and *Slater's Original Draught*, Archbishop *Potter* on Church Government, *Hooker's Ecclesiastical Polity*, and *Bennet's London Cases*. On Popery, read *Chillingworth*.

11. On *Antiquities*, read *Josephus, Usher's*, Sir *Isaac Newton's* and *Bedford's Chronology, Shuckford's* and Dr. *Prideaux's Connexion*, *Bingham's Origines Ecclesiasticae, Cave's Primitive Christianity, Historia Literaria*, and *Lives of the Fathers*.

12. On *Politics, Civil*, read *Plato, Aristotle, Grotius, Puffendorf, Justinian's Institutions, Wood's Institutes — Ecclesiastical*, read *Johnson's Vade Mecum, Bp. Gibson's Codex*.

13. *Histories*, read Sir *Walter Raleigh* abridged and continued, *Rollin's History of the Antient Nations, Echard's Roman and Ecclesiastical Histories, Dupin and Eusebius dit. Rapin's History of England, Lord Clarendon's History of the Rebellion*.

14. *Sermons*, read *Sanderson*, *Taylor*, *Barrow*, *Bull*, *Tillotson*, *Sharp*, *Kidder*, *Dr. Sherlock*, *Bp. Sherlock*, *Maynard*, *Lucas*, *Atterbury*, *Wake*, *Moss*, *Stanhope*, *Trapp*, *Johnson*, *Watts*, etc.

15. *On Cases of Conscience*, read *Taylor's Ductor Dubitantium*, and *Sanderson's Praelectiones*. —

FINIS

A TABLE OF CONTENTS ³

Learning is the knowledge of every thing that may contribute to our well being and happiness both in theory and practice, and consists of two parts:

I. *Philology*, or the study of words and other signs: To this head belong:

1. Grammar of pure language.
2. Rhetoric, of figurative speech used in:
 1. Oratory the art of persuading.
 2. History which relates real facts.
 3. Poetry which describes things either real or imaginary.

To all which belongs the art of criticism. And with these are taught the first things of mathematics which belong to the doctrine of signs.

II. *Philosophy*, or the study of the things signified by them whether bodies or spirits or any thing relating to them; and is reduced to four heads:

1. Rational, in metaphysics and logic, which explain and cultivate our reasoning powers.
2. Mathematical in arithmetic and geometry, which teach to reason on abstract quantity, number and magnitude.
3. Natural, which teaches the knowledge of the natural world, in mechanics, physics or geology and astronomy, which explain the phenomena both in earth and heaven.
4. Moral, which teaches the knowledge of the moral world, and is
 1. Speculative, in pneumatology and theology relating to spiritual beings.

³ This and the following table are taken from a ms. entitled "An Introduction to the Study of Philosophy: exhibiting a general view of all the parts of learning for the use of pupils." It was written about 1748 and was published with slight changes as the Introduction to the *Elementa Philosophica*.

[The Editors.]

2 Practical, in

1. Ethics relating to manners in general.
2. Economics, relating to the conduct of families.
3. Politics, relating to the government of kingdoms and republics with regard both to things civil and ecclesiastical.

The whole may be seen in one view in the following table.⁴

Learning is the knowledge of everything that may contribute to our true happiness, both in theory and practice, and consists of two parts:

I. *Philology*, or the study of words and other signs; and is:1. *General*, or common to all kinds, in

1. *Grammar*, of pure language.
2. *Rhetoric*, of figurative speech.

2. *Special*, of particular kinds of speech, in

1. *Oratory*, which treats of true eloquence.
 2. *History*, which relates real facts.
 3. *Poetry*, which describes things either real or imaginary.
- To all which belongs the *Art of Criticism*.

II. *Philosophy*, or the study of the things signified by them, whether bodies or spirits, or any thing relating to them; and is:1. *General*, or common to all kinds of beings; and is:

1. *Rational*, in *metaphysics* and *logic*, which cultivate our rational powers.
2. *Mathematical*, in *arithmetic* and *geometry*, which teach us to reason on abstract quantity number and magnitude.

2. *Special*, or peculiar to each kind of beings; and is:

1. *Natural*, which teacheth the knowledge of the natural world and bodies, in *mechanics*, *physics*, and *astronomy*, which explain the phenomena both in heaven and earth.

⁴ This table is practically identical with that at the end of the Introduction to the *Elementa Philosophica*, [1752]. A further revision is to be found at the end of the first part (*Noetica*) of the *Elementa Philosophica*. A final version of the "Synopsis" was appended to his "English and Hebrew Grammar" and is given below, p. 352. [The Editors.]

2. *Moral*, which teaches the knowledge of the moral world of spirits, being
 1. *Speculative*, in *pneumatology*, and *theology*, relating to spiritual beings.
 2. *Practical*, in
 1. *Ethics*, relating to manners in general.
 2. *Economics*, relating to the conduct of families.
 3. *Politics*, of the government of kingdoms and republics, both civil and ecclesiastical.

CORRESPONDENCE CONCERNING JOHNSON'S
SYSTEM OF MORALITY

BENJAMIN COLMAN TO SAMUEL JOHNSON. JUNE 2, 1746.

Rev'd Sir: —

I have read your new *System of Mortality* with a pleasure which I cannot easily express. You have honored our country by this production of the most perfect piece of ethics, and in the best form that I have seen in any language, and I like it most in our own. I hope the tutors in our academies may ever with the greater advantage read it to their pupils, show them the connection and strength of every part of it and the force with which it should enter their souls and abide there. For I think it is strongly adapted to inform the mind and affect the heart and under the blessing of the Holy Spirit to form both unto all the exercises of virtue and piety, in its connection with and submission to the sacred Scriptures, and the revelation of Jesus Christ, who is the end of the law for righteousness to us sinners.

Yet, Sir, I also freely own to you that your words, p. 64. "of God's sending a glorious person under the character of his own Son, who had an inexpressible glory with Him, before the world was," although inforced by the following Scripture expressions — "the express image of his person, and the fulness of the Godhead dwelling in Him bodily in his incarnate state:" — seem not enough to me in honor of revealed religion, the holy Scriptures: by which it is, Sir, that our reason is illuminated and raised to such a gracious height, as that you (my honored Brother) after the diligent study of them for many years, have by their help and the assistance of the blessed Inspirer of 'em (I am willing to add) been enabled to write this correct and exalted book of ethics.

Your own modesty will not permit you to blame me if I freely say that none of the learned heathen ever wrote to this height, with like perspicuity, method, and enforcement on conscience. It is the Christian divine, after a diligent search into the religion of Jesus, together with what the masters of morality had wrote before His

manifestation in the flesh or since that blessed day, who exhibits himself in your treatise. And though I am too much a stranger now to Mr. Wollaston's *Delineation of the Religion of Nature* to give my opinion of it, yet I persuade myself also that his performance (praised as it has been by those that I highly esteem) may stand also much indebted to his improvements by Christianity.

Upon all, Sir, to lay my whole intention before you in this latter part of my letter, I request you to consider whether those words "a glorious person under the character of his own Son in our nature, who had an inexpressible glory with Him before the world was," with what follows of Scripture expressions in that pious paragraph, is sufficient to answer unto the doctrine of the eternal Godhead of Christ, as it is explained to us in the Athanasian Creed, daily read in your worshiping congregations. This is the defect that occurs to me in the close of your excellent treatise; which yet I have not observed to any one but yourself. And I hope, Sir, that this freedom, after the high brotherly regards I have been expressing, will be candidly taken by you.

I ask your prayers for me in my age and wishing you always the presence of God with you in your holy studies and ministrations, I am

Rev'd Sir,

Your affectionate brother and servant,

Benjamin Colman

Boston, June 2, 1746.

TO BENJAMIN COLMAN. JUNE 12, 1746.

June 12, 1746.

Rev'd Sir:—

You needed not to make an apology or bespeak my candor for so very kind and obliging a letter as you did me the favor to write of the 2nd instant. The favorable opinion you express of that small piece of morals I wrote I wish it could pretend to deserve, and I am highly obliged to you for the candor wherewith you read it, and the brotherly kindness you express towards me. But what I am particularly obliged to you for is that you was so good as to point out to me the passage you mention as what you apprehend liable to exception. This I take as a singular act of friendship, and what the rather deserves my thankful acknowl-

edgment, as it comes from a gentleman of your venerable age and character and one to whom I had never had the honor of being known. I apprehend therefore that as I had the presumption to appear in public your kind aim was that nothing that I offer should be either liable to misconstruction or of any mischievous tendency to the disadvantage of our common faith.

In answer therefore to your kind suggestion I beg leave to say that, as I am sincerely tenacious of the Athanasian Faith, so I beg those expressions may not be understood to be inconsistent with it but rather expressive of it as they appear to me to be, and that you will do me the favor to assure any gentlemen of this who may be apt to suspect me. The only reason of my expressing myself as I did was because I was not willing to meddle with anything controversial, and therefore chose to confine myself to the language of the Sacred Scriptures. However if it were not too late I could wish one word were inserted which would put the matter out of all ambiguity. I would express it thus: "Who was truly God of God and had inexpressible glory with Him from all eternity before the world was." And I should be highly obliged to you if you will desire the printer (provided it be not too late) to insert those words "was truly God of God from all eternity" in their proper places. I readily agree with you that even such an imperfect sketch of morals as this could never have been beat out without the help of revelation, to which no doubt but Mr. Wollaston was also very much beholding, and indeed I am of opinion that those noble pieces of Epictetus, Antoninus and Heiroleas, tho' they were not confessed Christians, were notwithstanding the better for the light which Christianity had brought into the world, tho' they had it at second hand, which indeed might be the case with Seneca and Tully before and even Plato and Pythagoras who in their travels might pick up many notions which originally came from the inspired prophets. I again repeat my humblest thanks for your kind letter and especially for your prayer for me with which it concludes, and beg the continuance of it, and I earnestly pray to God for you that He will be your shield and the staff of your age while you continue here and your exceeding great reward in a better world hereafter.

I am, Rev'd Sir,

Your most obliged etc.

S. J.

FRAGMENT OF LETTER TO BENJAMIN FRANKLIN. MAY 10, 1750.

. . . I drew it up at first only for the use of my sons, and had no further thoughts but when I thought it necessary to take pains to transcribe it in order for your perusal, I could not forbear having the vanity to wish it might be useful to others, for I was always very desirous if I could, to contribute something towards promoting the interest of learning in the country, and could therefore wish (tho' I dare not expect) that it might obtain so favorable an opinion with gentlemen as to be thought not altogether undeserving the press, but as to this I am entirely resigned to the judgment of my friends, and particularly do submit it to your candid judgment and that of any friend to whom you may think it worth the while to give the perusal of it, only if it were to be printed I should be glad you would suggest any defects you observe in it or anything that might make it more intelligible and useful. I will only add that if it were thought in some measure fit to be printed, and practicable to get it done, I had some thoughts of printing with it a new edition of my *Ethics*, with some enlargements and emendations, and that I believe I could dispose of one hundred copies of it here, and perhaps another 100 might be disposed of at Boston, and some at New York, and the Jerseys. However I entirely submit what I have thus had the assurance to write, to your free and candid animadversion and remain

Sir, your most humble, etc.

S. J.

BENJAMIN FRANKLIN TO SAMUEL JOHNSON. JULY 2, 1752.

Philadelphia, July 2, '52.

Rev. Sir:—

I have sent you via New York, twenty-four of your books bound as those I sent you per post. The remainder of the fifty are binding in a plainer manner, and shall be sent as soon as done and left at Mr. Stuyvesant's as you order.

Our academy, which you so kindly inquire after, goes on well. Since Mr. Martin's death the Latin and Greek School has been under the care of Mr. Allison, a dissenting minister, well skilled in those languages and long practiced in teaching. But he refused the rectorship, or to have anything to do with the government of

the other schools. So that remains vacant, and obliges the trustees to more frequent visits. We have now several young gentlemen desirous of entering on the study of philosophy, and lectures are to be opened this week. Mr. Allison undertakes logic and ethics, making your work his text to comment and lecture upon. Mr. Peters and some other gentlemen undertake the other branches, till we shall be provided with a Rector capable of the whole, who may attend wholly to the instruction of youth in these higher parts of learning as they come out fitted from the lower schools. Our proprietors have lately wrote that they are extremely well pleased with the design, will take our seminary under their patronage, give us a charter, and, as an earnest of their benevolence, five hundred pounds sterling. And by our opening a charity school, in which near one hundred poor children are taught reading, writing, and arithmetic, with the rudiments of religion, we have gained the general good will of all sorts of people, from whence donations and bequests may be reasonably expected to accrue from time to time. This is our present situation, and we think it a promising one; especially as the reputation of our schools increases, the masters being all very capable and diligent and giving great satisfaction to all concerned.

I have heard of no exceptions yet made to your work, nor do I expect any, unless to those parts that savor of what is called *Berkeleyanism*, which is not well understood here. When any occur I shall communicate them.

With great esteem and respect, I am, dear Sir,

Your obliged humble servant,

B. Franklin.

TO BISHOP BERKELEY OF CLOYNE. AUG. 12, 1752.

August 12, 1752.

My Lord:—

This will go by Miles. I must begin with most humbly begging your Lordship's candor and pardon for the liberty I am now presuming to take in handing you the poor performance here inclosed which I assure your Lordship does not proceed from the least imagination that there is anything worth your notice or that might otherwise dare to venture under your eye, but from an earnest

desire that I might if possible be some way instrumental in promoting the interest of learning in this uncultivated country, which I have long thought could not be better done so far as these studies are concerned than by endeavoring as much as I could to gain their attention to your Lordship's most excellent writings, and I have thought this would best be done by publishing some small manual for young students exhibiting a short sketch of them with references, which I have here attempted, adding in their places some of the best things I could find in others. Indeed I first drew these pieces up for the use of my sons in assisting and methodizing their thoughts on these subjects and had then no thoughts of printing, but they thereby coming to be known, I was put upon revising and printing them by one Mr. Franklin, an ingenious public-spirited gentleman of Philadelphia, a zealous promoter, and one of the founders of their college, for the use of that and with some view also at our own and at the college at New York when that should go on (which by the way as yet through their uneasiness proceeds very heavily). Now as they have actually begun to lecture upon these pieces at Philadelphia and by that means the frequent call for this impression may in time occasion another, since I could not consult your Lordship before printing this, I thought I would humbly ask the favor of your remarks that whereinsoever I have made any mistakes or misrepresented your sense or injected any wrong notions of others, you would do us the favor to take notice of them to me if you do not find them so many as would make it too troublesome, that I may correct them against any future impression. This favor I would by no means ask but that the public utility is concerned in it here on which account I the rather hope for your Lordship's pardon, whose zeal and labors for the good of mankind, however distant as well as near you, are so gréat, so excellent, and so conspicuous. But it would be infinitely better if this should be the occasion of inducing your Lordship to condescend to draw up something of your own of this kind fitted for the use of such as are young beginners in these kind of studies. I must also beg your Lordship's pardon for presuming to prefix your name to this slender feeble attempt, which I should not have ventured to do but that it was thought it might contribute something towards my aim above-mentioned, *viz.* gaining the attention of our youth to your admirable writings. This my Lord is the best apology I am able to make for the trouble I now

give you, and with my humblest duty to your Lady, begging your blessing, I remain,

My Lord,

Etc.

S. J.

P. S. I hear Mr. Hall is just returned with a high sense of your Lordship's favor to him.

CORRESPONDENCE CONCERNING *ELEMENTA PHILOSOPHICA* AND OTHER PUBLICATIONS

BISHOP SECKER TO SAMUEL JOHNSON. MARCH 19, 1754.

Deanry of St. Paul's, March 19, 1754.

Good Dr. Johnson,

I should have returned you my hearty thanks before now, if extraordinary business had not put it partly out of my power and partly out of my thoughts, for your favors by Mr. Smith. He is, indeed, a very ingenious and able, and seems a very well-disposed young man. And if he had pursued his intention of residing awhile at Oxford, I should have hoped for more of his company and acquaintance. Nor would he, I think, have failed to see more fully, what I flatter myself he is convinced of without it, that our universities do not deserve the sentence which is passed on them by the author whom he cites, and whose words he adopts in p. 84 of his *General Idea of the College of Mirania*. He assures me they are effaced in almost all the copies. I wish they had not been printed, or that the leaf had been cancelled. But the many valuable things which there are in that performance, and in the papers which he published in New York, will atone for this blemish with all candid persons. And there seems a fair prospect of his doing great service in the place where he is going to settle. I am particularly obliged to you for sending me your book; of which I made a very acceptable present to the late excellent Bishop of Cloyne's son, a most serious, and sensible, and prudent young man, whom his father placed at Christ Church, and who, with his mother and sister, spent the last summer with me in Oxfordshire. I have now lately received from Mr. Smith another copy of it, printed here; and have read several parts of it, and all with much pleasure. You have taken very proper care to keep those who do not enter into all the philosophy of the good and great man from being shocked at it, and you have explained and recommended just reasoning, virtue, and religion, so as not only to make them well understood, but ardently loved. Would God there were any present hopes of executing what the

concluding piece unanswerably proves to be harmless, useful, and requisite. But we have done all we can here in vain, and must wait for more favorable times; which I think it will contribute not a little to bring on, if the ministers of our church in America, by friendly converse with the principal dissenters, can satisfy them, that nothing more is intended or desired, than that our church may enjoy the full benefit of its own institutions, as all others do. For so long as they are uneasy, and remonstrate, regard will be paid to them and their friends here by our ministers of state. And yet it will be a hard matter for you to prevent their being uneasy, while they find you gaining ground upon them. That so much of the money of the Society was employed in supporting Episcopal congregations amongst them, was industriously made an argument against the late collection. And though, God be thanked, the collection hath notwithstanding proved a very good one, yet unless we be cautious on that head, we shall have farther clamor; and one knows not what the effect of it may be. Our friends in America will furnish us, I hope, from time to time, with all such facts, books, observations, and reasonings, as may enable us the better to defend our common cause.

I am, with great regard and esteem, Sir,
 Your loving brother and humble servant,
 Tho. Oxford

TO BISHOP SECKER. OCT. 25, 1754.

Stratford in New England,
 October 25, 1754.

May it Please Your Lordship:—

I am most humbly obliged to your Lordship for your very kind letter of March 19th which came to my hands last August, and demands my most thankful acknowledgments.

As to Mr. Smith, he had printed his *Mirania* before Mr. Barclay and I became acquainted with him, though this was soon after. We were both very sorry and much blamed him for inserting that very abusive passage from the *Review* about the universities, and advised him to efface it in all the copies he had yet in his power, and he said he was sorry he had inserted it, so that I hope none on your side of the Atlantic would ever have seen it, and I wish it never had been.

I am extremely obliged to your Lordship for the candor with which you condescended to peruse that little low performance of mine which Mr. Chandler sent you, and for the kind things you are pleased to say of it, which I wish it could pretend to deserve, and I should have been particularly thankful for any observations you might have made on its defects, because I would by no means mislead young beginners, for whose sake it was published. Mr. Smith was desirous of getting it reprinted in London, and had my leave, and some corrections I made, and gave him a more accurate scheme for a partition of the sciences than those in the Philadelphia edition; but when I came to see his edition, I was not a little surprised to find what a strange liberty he had taken with it, there being scarce a page in which he had not made some alterations, many of which I think are by no means any advantage to it, but much the contrary; and though I do not think he had any unkind (nay I believe he had a kind) intention in them yet I cannot say I thank him for them.

As to the letter about bishops, I had no notion of his publishing any such thing as mine; and indeed it was most of it his own composition from some papers I gave him and letters I showed him, and from what passed in conversation, and whether it was prudent to publish everything inserted in it I am not clear. I believe he means well, and is truly an ingenious and I hope he will be a very useful man, but he is a youth and wants a little more knowledge both of himself and the world than he has as yet had opportunity for. Pardon me, my Lord, for saying thus much.

What your Lordship says on the subject of that letter is very melancholy. I now almost despair, and very much doubt those more favorable times you hope for will never come. So far from this, that I rather fear the age is growing worse and worse so fast, that the freethinkers and dissenters, who play into one another's hands against the Church, will never drop their virulence and activity, by all manner of artifices, till they go near to raze the very Constitution to the foundation, both in Church and State. It is a sad omen that their interest with the minstry should be so much superior to that of the Church, that she cannot be heard in so reasonable and necessary a thing, and when she asks no more than to be upon a par here with her neighbors, in having leave to enjoy the benefit of her own institutions as well as they. Is it then come to this, my Lord, that she must ask the dissenters' leave whether

she may be allowed to send so much as one bishop; even though it were but a transient one, once in seven years, to take care of all her numerous children, scattered over so vast a tract of the English dominions? If these dissenting governments in New England, who scarcely tolerate the Church, must be indulged, yet why may not one be allowed to be sent to New York or Maryland, or Virginia, or South Carolina, in which colonies the Church is established by law? This is extremely hard indeed! Our candidates would gladly ride, if it were five or seven hundred miles, for Orders, vastly rather than go over the sea 1000 leagues, which has proved so fatal to many of them.

I have, my Lord, above these 30 years been trying by many good offices, and all the means of a friendly converse with the chief of them to convince them that nothing more is intended than what I mentioned above, and many of them are good men and have no objection; but so far are the prevailing party from being softened, that of late they seem a good deal worse than they were (encouraged I suppose by their potent friends at home), for now they will not suffer the pupils of our College at New Haven, that belong to the Church to go to the Church there, nay, offer to fine Mr. Punderson's own sons for going to hear their father, as I suppose he will inform the Society, when at the same time the Church at New York (where it most prevails) is about founding a college with free liberty to dissenting pupils to go to what meeting they please; nay not excluding dissenters from being even tutors, and only desiring such a preference in their charter, as that the President of the College be always a member of the Church, and that an abridgment of the service of the Church be used for Morning and Evening Prayer, and offers at least seven tenths of the charge in founding, endowing, etc. And yet such a hideous clamor is raised against her for having any sort of preference or any charter on these terms, by a small busy faction of dissenters headed by four or five bigotted violent freethinkers, as threatens throwing the government into confusion and frustrating the whole design: and this notwithstanding that they have three colleges in these northern colonies and the Church none. Nay they contend that no religion at all should be taught in the college rather than the Church should have any precedence. So bitterly are they set against us! And however so much they are otherwise at variance among themselves, yet they unite with their utmost force against us,

and do all they can to disaffect the Dutch towards us, who otherwise were peaceably disposed. Thus, my Lord, it is here, and so I doubt it is at home, that by how much the more mildly they are used, by so much the more assuming and active they grow in their endeavors (not only to hinder the promoting them here, but) even utterly to demolish the Episcopate and the Liturgy there!

And as to our gaining ground of them here in New England, it is not owing so much, my Lord, to any endeavors of ours, as to their own wretched divisions, separations and confusions among themselves, occasioned by their late enthusiasm, and to the growth of Latitudinarianism, Arianism, Socinianism, Pelagianism, and even infidelity occasioned thereby; which lead many honest people, who can find no sure footing elsewhere to retire into the Church as the only ark of safety amid such a deluge of corrupt opinions and practices. So that I humbly hope our great and good benefactors will not think their charity ill bestowed in contributing towards the support of the Church in these parts, that it may be an asylum and refuge for those honest wandering souls, that can find no rest out of it. This my Lord, is a true state of the case: and what, I beg, would the patrons of the dissenters have us do in the case? Must we discourage these people from coming into the Church? And yet they are in such small scattered bodies that they cannot support ministers (though two or three such collections join together) without assistance. Is it then an ill-judged charity to give them a little help?

I again humbly beg your Lordship's pardon for my tediousness and this too great freedom in writing, to which your great goodness and condescension hath too much emboldened me. I am very glad to find the late excellent Bishop Berkeley has so very worthy a son. He lately did me the honor of a most kind and elegant letter, to which I reply by this opportunity. There has been no reply published to Mr. Beach's answer to Hobart, nor anything else pro or con, relating to the Church. I purpose, notwithstanding the opposition soon to settle myself at New York, in the care of their young college; in view of which I humbly ask your Lordship's prayers and blessing, and remain, with the utmost veneration, my Lord, your Lordship's

most dutiful most obliged and
obedient humble servant,

To my Lord of Oxford.

Samuel Johnson.

HEZEKIAH WATKINS TO SAMUEL JOHNSON. AUG. 8, 1755.

Newburgh, August 8th, 1755.

Rev'd Sir:—

I have had the favor of your kind letter of July 7th, 1755. And Colonel Mathews tells me he hath brought the books mentioned in yours.

According to your request I have sent Dr. Cudworth on *Eternal and Immutable Morality*.

I do assure you that you may at any time have the reading of any of my books with the greatest freedom. I am not averse that any of my brethren in town should have the reading of my books if they are desirous.

That you may inform yourself of my books, I have sent you a rough catalogue of all, except some school books.

The Deists are still very bold. Witness Bollingbroke and Hume. Whether you have seen the works of Mr. Hume I cannot say. He undertakes to prove the impossibility of miracles from the nature of things. As I have lately had an answer to him done by Mr. Adams, I take the liberty to send it, for your perusal. I have read it but once, and should be glad to have it returned as soon as you can conveniently. Cudworth I am in no haste about. I send these by Mr. Jackson, the boatman who uses the North River trade and lives at New-Windsor, as he is almost every week at York, it will be convenient to send by him.

I hope to be in town this fall and give myself the pleasure of waiting upon you. In the interim, I remain

Rev'd Sir,

Your most obedient and humble servant,

Hezekiah Watkins

TO GEORGE BERKELEY [JR.]. DEC. 10, 1756.

King's College, New York, December 10, 1756.

Dearest Sir:—

I have now before me three of your very kind affectionate letters to acknowledge, which I most gratefully do. In particular I thank you for the very tender sympathy you express on occasion of the loss of my dear son, which is indeed a very heavy loss not only to me and my family but to the poor people to which he was to minister and hath been most affectionately lamented by all that knew him.

Your reflections on this unhappy occasion are both very just and kind, and I thank God, under such considerations he has enabled me to bear it better than I could have expected, and however hard it bears on flesh and blood, as I am deeply sensible that our heavenly Father both always knows and does what is best, I heartily join with you in saying, not my will, O my God, but Thine be done. And I gladly take this opportunity to render my most hearty thanks to you for the great kindness wherewith you treated my dear son, when he was at Oxford, and I beg you will give my humblest service and thanks to all those good gentlemen, as though named, into whose conversation you introduced him, and who treated him with so great kindness, and indeed to the whole Senate for the good honor they did him in his degree, of all which he had a most pleasing and grateful sense, as abundantly appears both from his journal and a letter he wrote to me from London soon after. His satisfaction in his journey to Oxford was inexpressible and particularly I beg you will give my humblest duty and thanks (lest my letter should miscarry) to my Lord of Oxford whose treatment of him was like that of a father and friend rather than a stranger and inferior for which I cannot be sufficiently thankful. I am very much obliged to you for sending me a copy of your justly renowned and ever honored father's epitaph, for whom I had the most intense affection. It is extremely just and elegant. It was a mighty satisfaction that our friendship was like to be continued in our sons, but since God has been pleased to deny it in him that is gone, I wish it may be continued in my only surviving son who, tho' he is a lawyer and (thank God) is in the best estimation in that profession, yet his chief affection is towards divinity of the best sort, having read Hutchinson, etc., and would shine in that if he could have Orders without such a dangerous voyage, which yet he would not much regard if he had not a family. I beg, therefore, though unknown, he may be numbered among your friends. I desire when you write you will give my humblest service to that excellent lady, your troubled mother, as well as your brother of whom I should be glad to hear, and assure her that I do most tenderly sympathize with her in her affliction, and do earnestly pray to God for the relief of your dear sister. I bless God who has insured your heart with a disposition to take Holy Orders in this degenerate apostatizing age in which a man had need to have the spirit of a confessor, if not a martyr, and I shall not cease to pray earnestly that you may both have the grace

and opportunity to act a worthy part in that capacity for which you are so excellently qualified. And now, Sir, it is time that I consider the subjects of your other letters, and particularly that I render you my most hearty thanks for the most kind present of books you was so good as to send me, which I wished I could retalliate. I should have done this sooner, but that they arrived not long before the sad news of my son's death, having lain so long with the Secretary that he had forgot whence they were. Dr. Ellis's performance I am highly pleased with so far as religion is concerned, but I cannot say that I am satisfied with either Mr. Locke or him in that part. I cannot think sense the only source of our knowledge and must conceive consciousness and the pure intellect another without which instruction could take no effect, though it take in the first materials. Bishop Berkeley, Dr. Cudworth, and Plato should be well considered. I desire you will give my humble service and thanks to Mr. Halloway for his kind present which is an excellent performance, but I am afraid of going out of one extreme into another and so hurting the cause of our holy religion by carrying the honor of allegorizing too far as some of the pious fathers seem to have done, and I have thought sometimes a handle has been groundlessly, at least it has been wickedly, taken by the enemies of Christianity to set them in a very ridiculous light. Dr. Patten's, Mr. Willas's, and Mr. Horne's performances are exceeding good and I am in particular prodigiously pleased with Mr. Horne's *State of the Case*, etc., which carries all before it. Would to heaven all Hutchinsonians would write in that candid and powerful manner. Their cause, which I am persuaded is the cause of God, would at length methinks bear down all opposition. I long for those things he seems to hint as being upon the anvil. In short I am very much obliged to you for all those tracts which are very excellent. I am heartily glad Mr. Hutchinson's works are so much esteemed at Oxford, and you may depend upon it I shall do my best to make that university my pattern as far as may be; and particularly to induce as many as I can to study the Hebrew Scriptures to understand his writings. I thank God my college has at last got the victory of its enemies, having had an Act passed this fall in favor of it by our Assembly and all opposers stop their mouths, and the foundation of the building is laid to be carried on vigorously in spring. But as we shall want much assistance, I am very thankful for the forwardness you express to promote and for the books

contributed, and believe we shall soon empower somebody to put forward a subscription in England. As to Tillotson I have myself been heretofore a great admirer of his sermons, but for these several years have been sensible of the ill effects of them in these parts as well as of some others worse than they much here in vogue and done my best to guard against them but as he has long been in possession, it will not do here to speak against him with much acrimony except among Methodists. The remarks on his life are doubtless but too just. However it is good to keep the golden mean and hold moderation as far as can consist with a wise zeal and steadiness to the cause of God and the truth as it is in Jesus. I am sadly grieved for the melancholy account you give me of some of the chief dignitaries and the condition of the Church there, and little hopes of any establishment in our favor here. I confess I should scarce have thought my dear son's life ill bestowed (nor I believe would he) if it could have been a means of awakening this stupid age to a sense of the necessity of sending bishops (at least one good one) to take care of the Church in these vastly wide extended regions. But, alas, what can be expected of such an age as this. *O Deus bone in quae tempora reservasti nos!* This is now the seventh precious life (most of them the flower of this country) that has been sacrificed to the atheistical politics of this abandoned age which seems to have lost all notion of the necessity of a due regard to the interests of religion in order to secure the blessing of God on our nation both at home and abroad. As to us here as things have hitherto gone we can scarce look for anything else but to come under a foreign yoke. But it is now high time I should relieve your patience when I begin to have scarce any left of my own. I therefore conclude with my sincere thanks for your affectionate prayers for me and mine, the continuance of which I still desire, and be assured that both you and your relatives and friends shall always be fervently remembered in mine, who am, dearest Sir, your most affectionate friend and brother in Christ,

S. J.

TO MR. HORNE AT OXFORD. DEC. 5, 1761.

December 5, 1761.

Rev'd Sir:—

Ever since I read your admirable state of the case between Sir Isaac and Mr. Hutchinson, with which I was vastly pleased; but

especially in consequence of the great kindness you expressed to my late dear son and the honor conferred upon him by your illustrious university, and the honor you did both to him and me in your kind mention of us in your apology, I have intended to do myself the honor of writing to you to express my humble and thankful acknowledgements both to you and his other friends, but trouble of business pressing in a continued series one after another has hitherto hindered me; till having lately had occasion again to review your most excellent state of the case, etc., I thought I would though, thus late, presume to trouble you with a few lines to express my earnest wishes that some of you (and I hope you are about it) would give the world an entire methodical system of that sacred philosophy and theology in the same candid way to the best advantage. I say this because though Mr. Hutchinson's discoveries in the Hebrew Scriptures are admirable, yet his way of writing is obscure and disagreeable, which together with his asperity and temper and conviction has been I believe the chief if not the only reason that his extraordinary works have been no more read and considered, and so generally thrown by with contempt in this conceited and inattentive age. May I not hope that this is doing and will soon be done? I have written several times to good Mr. Berkeley, but whether my letters or his miscarrying or his leaving Oxford be the occasion, I have heard nothing from him these five years. If you ever see or correspond with him, please to give my most affectionate service to him. I have heard a rumor that the Reverend Dr. Patten has lately published some excellent performance, but cannot hear what it is. I shall be much obliged to you to make my humblest compliments acceptable to him, whose excellent sermons as well as yours are much admired here. It is uncertain whether the worthy youth Mr. Treadwell who carries this letter will see Oxford. If he should I beg your kind notice of him. My college, I thank God, is now in a pretty flourishing condition, and the building finished, only we want a fund to support sufficient officers. I am, Rev'd Sir, with great esteem,

Your most affectionate and obliged

humble servant,

S. J.

EAST APTHORP TO SAMUEL JOHNSON. DEC. 22, 1760.

Reverend Sir:—

It was but lately that I could meet with the book you did me the favor of recommending as an introduction to Mr. Hutchinson's writings. I was willing to give it a careful perusal before I replied to your last letter. The thoughts on religion, etc., are wrote in so masterly a manner, with so much perspicuity, candor, and love of truth, that they give me the most favorable impression, if not of the system, yet of the writer. No man, I suppose has better explained the doctrine of sacrifices and the emblems of the Jewish ritual. His conjecture on cherubim gives me ideas, where I confess I never had any: and I shall think it deserves attention till I meet with a better explication. It is perhaps owing to the turn of my own studies, and to my deficiency in physical knowledge, but I think there is much less evidence for his discoveries in natural philosophy, than for some he offers in theology. But I suspend my judgment on both, till I have acquired a more solid knowledge of Mr. Hutchinson's writings, which I destine for the employment of my future leisure, in a retirement which promises me some very happy opportunities. In the meantime, I confess, the common, literal, received sense of Scripture is to me most highly interesting, and seems the safer study for the unformed judgment of a beginner in these exalted enquiries.

Taylor, from whom I quoted the MS citation about points, is a LLD. of Cambridge, a Divine, but has not wrote professedly on these subjects. He has gained much reputation as an editor of the ancient Greek orators; but is esteemed rather a man of learning than genius.

I have often thought that the natural vowels נִי נָא (not י which seems, from some etymologies, equivalent to gn) might be, and perhaps originally were, so inserted in the whole text of the Bible as to render the points unnecessary.

I am extremely thankful for any intimations, with which your learning and experience may furnish me, in any branch of literature, to which my capacity or duty leads me, and I shall always receive your instructions with singular gratitude and deference.

In regard to Mr. Winslow's affairs with the Society, I shall take the first opportunity which offers, of recommending his interests to Mr. Trecothick. This I can do only in a general manner,

except I am favored from you or him with some particular directions. I shall esteem it a great favor, if when you have an opportunity you will oblige me with the piece you have lately given to the public on the subject of prayer.

I am, Reverend Sir,

Your obliged and most humble servant,

East Apthorp

Boston,

22 December 1760.

ANSWER TO THE REVEREND DR. APTHORP'S LETTER OF DEC. 22.

[December, 1760?]

Dear Sir:—

I am glad to find you are pleased with President Forbes, and especially with his explication of the ancient Mosaic rites and heiroglyphics which is the same with Mr. Hutchinson's, and that it hath engaged you to undertake an examination of that surprising system. I confess I was long before I could go into his notion of the cherubim: but the more I have considered it the more I am inclined to conclude in favor of it. Indeed I think he sometimes overdoes, and there are many particular criticisms and some incidental things in his scheme, that are yet problematical with me, but the main parts of it I own I am prone to think are the very truth, and that it gives by far the best account of the origin both of religion and idolatry that I have ever met with; but what singularly pleases me in it is that it supposes, and I think proves beyond hesitation, that the Christian system and method of our redemption was much more clearly taught and understood by our first parents and the ancient patriarchs and earliest nations than has commonly been imagined. Some remains of which (though mixed with great corruptions, as popery in Christianity) have been handed down through all the ages and nations of the world from the beginning to this day, so that there never was a tribe of mankind without something of revealed religion (without which they would probably never have had any at all) and so best answers the objections of want of universality as well as many others. The philosophical part may indeed seem more dubious, but when it appears so connected with the theological, I confess I am inclined to think favorably of it, and I believe it would help you

to do the more so if you had opportunity to read Pike's *Philosoph. Sac.* and especially Mr. Spearman's *Inquiry after Philosophy and Theology*, a small 8vo. You are right in seeking first to be set right in the literal sense, but as the liberal sense of that ancient heiroglyphical language was directly referred to a sense analogical and allegorical, founded on the analogy between the sensible and spiritual, the natural and moral world, teaching things spiritual and moral by means of things sensible and natural, it should seem best to study them both together. Perhaps "gn" may be as proper letters as any we have to express the power of γ but as they seem designed to express a sound deep out of the throat not unlike a coarse "o" it should seem to have something of the nature of a vowel. I long to have you have read Bayly's *Intro. to Lang.* which is here in Mr. Rivington's large store of books, among which there are many curious, and one particularly you would be much pleased with, viz. Peters' *Critical Dissertation on Job*, a learned performance, who though he don't appear to be acquainted with Mr. Hutchinson's labors, yet is near akin to him and seems to have cut up Warburton's system by the roots. I send you my little piece on prayer, but it is hardly worth your perusal being but a hasty performance wrote in the midst of much interruption so that it needs to be considered with much candor, and I humbly send Dr. Cutler and Mr. Caner each a copy with my compliments.

TO PRESIDENT CLAP. JULY 6, 1765.

Stratford, July 6, 1765.

To the Rev. Mr. President Clap:—

I thank you for your essay, with which I do entirely agree as to the substance of it. Nor do I think that men that really think can in reality differ from each other on such plain subjects as they often imagine they do. The main difference between us is that you begin where I end: you write in the synthetical order of thought, I in the analytical method, which to me seems more obvious to young beginners. Nor can I form any notion of moral perfection either in God or creature, without beginning with happiness as an end. To save writing I beg leave to refer you to the 14, 15, and 16 Sect. of the second Chapter of my *Noetica*, the first Chapter of the second part of my *Ethica*, etc. It is indeed a deplorable thing to see how good men will sometimes studiously differ in their way of explaining

the plainest things, when they both really mean the same thing, and in truth it is I think impossible for them really to differ only *quoad verba*. A sad instance of which we now have in Mr. Judson and Mr. Beach. Such a fatal effect has the old perplexed scholasticism upon writers, especially on your side, down to this day. You should have written Dr. Jenkins and Mr. Willats. That I may in some degree retalliate your kindness, I send you a little tract I published not long since, and a copy of it for your library. I am, Sir,

Your very humble servant,

S. J.

You have begun a work of great labor. It is pity Hutchinson is so obscure a writer. It would much facilitate that study if you had Parkhurst's new Hebrew Lexicon, which is by far the best thing in its kind that was ever done.

TITLE PAGE AND EDITOR'S PREFACE FROM THE THIRD
EDITION OF *ELEMENTA PHILOSOPHICA* ⁵

THE ELEMENTS OF PHILOSOPHY, CONTAINING

I. The most useful parts of Logic, including both Metaphysics and Dialectic, or the Art of Reasoning: with a brief account of the Progress of the Mind towards its highest perfection. To which is prefixed, A short Introduction to the Study of the Sciences.	II. A brief View both of the speculative and practical part of Moral Philosophy, as improved by Christianity. To which is added, An Original Letter concerning the settlement of Bishops in America.
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BY SAMUEL JOHNSON, D.D.

The Third Edition, corrected and enlarged.

Whatever the World thinks, He, who hath not much meditated on God, the human mind, and the Summum Bonum, may possibly make a thriving Earth-worm, but will most undoubtedly make a sorry Patriot, and a sorry Statesman.

Bishop Berkeley's *SIRIS*, Sec. 350.

LONDON:

Printed for A. Millar, in the Strand.

MDCCLIV

⁵ William Smith was authorized by Samuel Johnson to arrange for this London edition of his *Elementa Philosophica*. Smith took considerable liberties with the text, much to Johnson's annoyance. (See his letter to Bishop Secker under date of Oct. 25, 1754.) In Part X of this volume, where the first edition of Johnson's *Elementa Philosophica* is republished, minor changes made by Smith in the London edition have been disregarded, but major departures have been indicated by brackets and footnotes. The most serious changes made were the excision of Johnson's references to Hutchinson's theories (*Ethics* Part II, Ch. VI, Sec. 4), and the substitution of a prayer of the Editor's own composition for Wollaston's Prayer at the end. The letter concerning the settlement of Bishops in America, which was appended by William Smith, is only in part by Johnson (see letter to Bishop Secker, October 25, 1764), and is published in Volume III. [The Editors.]

THE EDITOR'S PREFACE

That a right education of youth is of the very highest importance to society, is a truth as universally acknowledged as it seems little attended to. But, of all parts of education, that which regards the *morals* of the people claims the greatest attention; for upon this depends all good government and social advantages.

Hence I have often wondered, that the study of morality and social duties should only be deemed to belong to the education of the recluse scholar, who seldom launches forth into busy scenes of real life; while the mother tongue, with writing, and some knowledge of figures, is all the education thought necessary to the commonality, who are the active part, the support, and the strength, of the commonwealth.

This arises from a notion that the knowledge of moral truths cannot be acquired without learned languages, abstract discussions, and laborious researches, for which the bulk of mankind has neither leisure nor ability. But nothing can be a greater mistake than this. It is impossible, that those truths and duties, the knowledge and practice of which God designed as the means of making man happy and keeping society together, should be any other way above the vulgar reach, than as they have been made so by the perplexing terms, imaginary distinctions, and affected obscurity of many writers. The social duties, with the most important and useful branches of morality and religion, are founded upon the most simple principles and obvious relations; and from thence may be deduced by a common understanding at no great expense of time or labor.

This mistaken notion, of the abstruseness of those branches of science which it chiefly concerns us to be well acquainted with, in order to the right conduct of life, is the less excusable, as it is one great cause of that universal corruption of manners seen among the people;—a corruption that threatens to bear down all before it, and must at length issue in public anarchy or slavery, in spite of the weak efforts of lingering patriotism to stem it, unless some more effectual reformation can be speedily wrought.

Such a reformation is only to be looked for in the rising generation. Those that are grown up we can only warn and exhort; but the young we may instruct and form. As the disease begun originally among the great, and spread downward, it would be happy if the remedy took the same course. Example is the most powerful school-master in the world. A freeman will think he has a right, in proportion to his abilities to launch as deeply into every fashionable vice as his superiors.

Next to this reformation begun from above, the most effectual measures will be, a more general attention to the education of the active commonality in good morals. I conceive it very practicable, for instance, by some plain definitions, to give the young mechanic right apprehensions concerning the nature of the Deity and the creature, and concerning the relation between finite and infinite. This foundation being laid, the various duties, divine, moral and social, may be clearly and familiarly deduced from it. On such a plan the fundamental truths and doctrines of our common Christianity might be rendered intelligible to an ordinary capacity, and pressed home in such an amiable light as to be irresistible on account of their own intrinsic beauty and happy tendency. After this, the end and use of society, the different forms of government, the excellency of our own, and all the consequent social duties of those who live under it, might be explained and ranged in such a natural manner, as to carry their own reason along with them, and rise from truth to truth, through a series of clear and natural consequences. All this might be done, by some able hand, in a short manual, by way of catechism or dialogue, in the Socratic method. And if such a system of religious and civil duties were put into the hands of young people, and made a part of their education, under a good master, it is impossible to say what a lasting impression it would make on their tender minds, and how greatly it would influence the conduct of their whole lives. These topics, which I have mentioned are not above the understanding of youth, neither do they require the knowledge of languages, nor the spending of more time than an hour or two every day, during the four or five years which the commonality otherwise spend at school, in learning to read, write, &c.

Though the following treatise is not exactly on the plan I have proposed, it having been originally written with a different view,

yet it may, in the meantime, be rendered of good service in such an education of the people as I have mentioned, which seems to be the only means left for retrieving the public and private virtue of this nation.

It was written originally for the schools and infant seminaries in America, and appears well calculated to supply a want that is great in the schools everywhere. In metaphysics and logic, now in some disrepute from the abuse of them, the author has judiciously confined himself to such things as are undeniably of universal use towards the conduct of reason and the ascertainment of the relations between finite and infinite, on which all truth and duty that concern us are founded. He is studious to give clear definitions, and above all things to embrace every opportunity of leading the young student to the Deity: nor is it to be doubted but the reading such a piece, under a good master, will make lasting impressions of virtue and piety upon youth, at the same time that it carries them pleasantly through their most important studies.

His metaphysics are not fine-spun notions, visionary and unimportant to mankind, but calculated to show us what we are, and with what powers endued. Hence his logic, is not idle sophistry and unmeaning jargon, but teaches the right application and conduct of those powers in searching after truth, which is their proper object, that so the mind may be filled with substantial knowledge, and not puffed up with airy speculations. And indeed that wisdom which has none of our grand concerns for its object, either mediately or immediately, but amuses the head without reaching the heart, may well be called foolishness.

His ethics are on the same useful plan with his metaphysics and logic. Those who have not time for tedious researches, 'tis hoped will find in them a short system of truths and duties arising necessarily from the relations in which we obviously stand. Thus they will be rationally instructed in what they owe to God, themselves, their country, and mankind; and thence be convinced that the injunctions of right reason and the precepts of Christianity are invariably the same. Those, on the other hand, who are designed for a more extensive study of moral philosophy, will find this summary an excellent introduction to the study of our greatest moral writers.

In a few passages, perhaps, our author, from a sincere zeal to

vindicate the rights of the Deity, and a just abhorrence of the absurd system of the materialists, has gone farther towards the opposite extreme than will be justified by some philosophers. If he errs, however, it is on the safe side, by referring all to God and considering him as all in all. This, if it is an error, is an error of piety, into which some men of the purest hearts, most exalted virtue, and sprightly genii of this age have fallen before him. But those who may condemn him, if they err on the other side, they must want this alleviation of a pious heart, and labor under this additional mortifying disadvantage, that, with all their boasted philosophy, they know too little of the laws of nature and the mighty plan of God, to affirm positively that this is, or is not so.

Every writer has some notions, either his own or some other person's, of which he is peculiarly fond; and of these our author has as few as any one, and none that tends to hurt, none that does not immediately tend to better the temper of the reader. For, whatever remote consequences a subtle genius may draw from any of his metaphysical notions, those consequences can do no harm to persons that cannot foresee them, and that from simplicity of heart, receive early impressions of piety from them.

I do not mean, however, to represent the author, as if he thought that truth can be served by means of error, or that the cause of the Deity and religion stands in need of one strained or unphilosophical notion to make impressions in its favor. On the contrary, he believes Christianity to be the sublimest philosophy. Revelation never says one thing and reason another; nor does the religion of nature ever contradict the religion of Christ. Far from this, he thinks that the deeper the sound philosopher pushes his enquiries, the greater reason he will still find to account the holy scriptures the only system of philosophy that rationally vindicates the ways of eternal providence to man, and renders the Deity amiable to his creatures. In them, we have the greatest discoveries concerning universal nature, the visible and invisible world. They enlighten the understanding at the same time they elevate and better the heart. They teach us the way to private peace and secure human society in this life, at the same time that they set immortality before us, and train us up for heavenly society in the next.

All I mean then is only to observe, that if the author has any way undesignedly fallen or been led into errors (and who that is

man can be always sure of not erring on such a subject?) they may be candidly excused from this consideration, that they are the errors of an honest heart, and such as can be no way dangerous to the young reader. But I do not mean to justify them for this cause. He does not even wish I should. He has no systems to erect, but is always willing to be set right, and will appear to be everywhere self-diffident, as knowing the sublimity of the subject he handles, and feeling his own weakness.

But it would be wrong in me to say anything on this occasion which his own modesty would disclaim. He would not attempt to forestall, but readily submit to the judgment of the impartial public. And that judgment, whatever it is, he will reverence, which is passed upon him by the cool dispassionate mind, who candidly considers, that he could have no other view in writing, but to present to the tender understanding, in the briefest and plainest manner, those truths and duties which tend to render the Deity more amiable and more adored; and mankind more reasonable, more happy, and more in love with one another.

As this was his grand object in writing, so has it hitherto been in living; and therefore whatever may become of his authorship, the superior part of his character will remain unviolated. He has been thirty years the Society's faithful missionary at Stratford in Connecticut, where he was settled when there was not another episcopal clergyman in that colony; and it may be easily imagined, that he labored under great discouragements at first among a people that either would not, or could not at that time make the proper distinction between episcopacy and popery. His prudence, however, and persevering goodness of temper prevailed; and he is now become the darling even of his dissenting neighbours themselves, who have frequent recourse to him in their difficulties, as to one of their own clergy. And indeed, though they have been accused of some recent instances of the old spirit, it must be said in justice to the people of that country, that they are a sober, honest and industrious set of men, and become every day more catholic in their principles, owing perhaps, in a good measure, to their converse with his and other episcopal congregations since settled among them chiefly by his means.

At the time Dean Berkeley (late * bishop of Cloyne) resided in

* Under his Lordship's patronage, he published the American editions of his book.

Rhode Island, he became intimately acquainted with him, and an uninterrupted correspondence was afterwards maintained between them in a series of the most affectionate letters till the death of the former. He often visited the Dean while he was in Rhode Island, who was then writing his *Minute Philosopher*; and I remember, some months ago, when I was at his house in Connecticut, our author took up the book, and reading some of the Dean's rural descriptions, told me they were, many of them, exactly copied from those charming landscapes that presented themselves to his eye in that delightful island at the time he was writing.

About ten or twelve years ago the University of Oxford complimented our author with the degree of Doctor of Divinity. And if a life spent in spreading religion and knowledge over the untutored parts of the world, as a pious and exemplary preacher, as a zealous instructor of youth, and as an honest man, deserved an honor, he well deserved it.

Thus much the Editor thought necessary to say by way of preface for the satisfaction of the reader, and in justice to his far distant friend.

He only begs leave to add that he hopes the same indulgence will be extended to his part of the book, which he has asked for the author, as he also has been actuated by the same sincere regard for truth.

WILL SMITH.

TITLE PAGE OF AN ENGLISH AND HEBREW GRAMMAR
AND LAST REVISION OF THE SYNOPSIS
OF PHILOSOPHY.⁶

AN / ENGLISH AND HEBREW / GRAMMAR / BEING /
The first short RUDIMENTS / OF / THOSE TWO LANGUAGES,
/ *Taught Together.* / To which is added, / A / SYNOPSIS⁶ / Of
all the PARTS of / LEARNING. / *Grammatica est Janitrix Sapien-*
tiae. / The SECOND EDITION, / Corrected and much amended /
BY SAMUEL JOHNSON, D. D. / Late President of King's-Col-
lege, in *New-York*; / now Rector of CHRIST'S CHURCH, at
Stratford, New-England, and Missionary from the SOCIETY. /
LONDON, / Printed for W. FADEN, in *Fleet-Street*, 1771. /
(Price One Shilling.) /

A SYNOPSIS OF ALL THE PARTS OF LEARNING

*A general Scheme for a Division of the Sciences, according to the
Natural Order of Things: or a Synopsis of all the Parts of
Learning.*

As *grammar* is the introduction to the other parts of learning, it may be of some use of set down the entire prospect of the whole in one short view, that young beginners may the better understand what it is they are about to undertake in the course of their education.

LEARNING, which the Greeks called CYCLOPAEDIA, implies the knowledge of every thing both speculative and practical, that is conducive to our true happiness, both present and future. So that the great *end* pursued thro' the whole, is, our happiness; and the *means* to that end, are knowledge and practice. *Science* is the knowledge of truth considered speculatively: and *art* is the knowledge of truth considered as directive of practice in order to our true good and happiness.

⁶ Only the synopsis is published here. It was also appended to *The First Easy Rudiments of Grammar, Applied to the English Tongue*. New York, 1765. [The Editors.]

Now all the parts of learning, both the sciences and arts, may be reduced to these two heads, PHILOLOGY and PHILOSOPHY, *words, and things.*

I. *PHILOLOGY* is the study of *words* or language, as a means in order the better to understand the nature of *things*. It is also called the *Belles Lettres*: and this is either *general* or *special*.

I. GENERAL PHILOLOGY is common to all kinds of speaking and is

1. GRAMMAR, which is the art of clearly and properly expressing the sense of our minds in words and sentences, either by speaking or writing. And
2. RHETORIC, which is the art of embellishing our language with the most striking and beautiful expressions, the tropes and figures.

II. SPECIAL PHILOLOGY treats of what is peculiar to several kinds of speaking and writing, as

1. ORATORY, which is the art of true eloquence, or of writing or speaking in the most persuasive manner, by inventing on every subject, all the proper arguments of persuasion, and disposing them to the best advantage, and in uttering or delivering our composition or speech in the most striking and graceful manner.
2. HISTORY, which is the art of making clear and exact narration of true matters of fact, with the circumstances of time and place, for the instruction and benefit of posterity. And
3. POETRY, which is the art of making a just and lively description of persons or things, either real or imaginary, with an elevation and dignity of thought, and the advantage of numbers and harmony and every ornament language is capable of, for conveying the most useful instructions attended with the utmost delight. And

Lastly, relating to all these is the ART OF CRITICISM, which teaches the true force of words and phrases, the nature of style and a true taste, so as to make a right judgment of the real beauties and excellencies of any performance, and to distinguish between what is genuine and what is counterfeit.

II. *PHILOSOPHY* is the study of truth and wisdom; or the knowledge of *things*, as being what they really are, together with a right conduct correspondent thereunto, in the pursuit of true hap-

piness, both here and hereafter. Now all the *things* or *beings* about which our studies in pursuit of truth and wisdom can be employed, are either *bodies* or *spirits*, i. e. *things sensible* or *intellectual*, which constitute the whole universe. The *world* of *bodies* and the *world* of *spirits*, or the *natural* and *moral* world. Hence *Philosophy* necessarily divides itself into those two great branches, *physics* and *metaphysics*, taking those words in a sense somewhat larger than usual. Understanding by *physics* the study of things of *nature* and sense, and what relates to them: And by *metaphysics*, the study of things that are above and beyond the sensible nature, or mere passive objects of sense; to wit, spiritual or intelligent, free, active beings, or *moral agents*, and what relates to them. The first is therefore properly called *natural philosophy*, and the second may be called *moral philosophy*.

I. NATURAL PHILOSOPHY then is the study of the nature of every thing in this natural or sensible world: this world of bodies, and what relates to them, and to the comfort and benefit of our life in this present state. And it is,

- I. *General* in the *mathematics* which reach the knowledge of the first common affections of bodies, *number* and *magnitude*, which are necessary *praecognita* to the study of the following parts; hence
 1. ARITHMETIC, which is the art of numbering: to which belongs *algebra*.
 2. GEOMETRY, which is the art of measuring, to which belongs *trigonometry*, *surveying*, *gauging*, and the *doctrine of the sphere* and *cylinder*, and of *conic sections* and *fluxions*.
- II. *Special*, of all the particular things in the natural world; and this contains the following sciences and arts:
 1. MECHANICS, which explain the nature and qualities of bodies, and the forces by which they move and demonstrate the various laws of their motion. Here belong *statics*, *pneumatics*, and *hydrostatics*.
 2. PHYSICS, (strictly so called) or GEOLOGY in which we contemplate this terraqueous globe and its atmosphere, with its parts and furniture, both *inanimate* and *animate*. The *first* are the elements, fire, air, water and earth: the stones, mines, minerals, and meteors: the *other* are plants and animals, and particularly the wonderful structure of our own

bodies. Here therefore belong *geography, navigation and commerce; agriculture, chemistry and botanics; optics and music; anatomy, surgery, and medicine*; and everything useful in life. And

3. ASTRONOMY, in which from the earth we launch forth into the vast and unmeasurable ether, and contemplate the heavens and stars, both fixed and erratic; particularly our sun with his splendid chorus of planets and comets; and determine their orbits, magnitudes and densities, and the laws of their motions, in the tides of their fluids, and their diurnal, and annual, revolutions. To which belong *chronology and dialling*. In all these parts of natural philosophy there are many arts and *practical matters*; and the facts in all nature are related in *natural history*.

II. MORAL PHILOSOPHY is the study of the moral world, or the world of intelligent, free, active beings or moral agents, and what relates to them, in the pursuit of our true happiness, both here and forever in our future state. Here then we ascend from the sensible and *natural*, to the intelligent and *moral* world, from the world of *bodies* to the world of *spirits*. And this is either *speculative* or *practical*: The first relates chiefly to *truth*, and may be (more strictly) called *metaphysics*; the second relates chiefly to *duty* or *manners*, and in a large sense, may be called *ethics*.

- I. The *speculative part* of *moral philosophy* in its full extent, explains what can be known of intelligent active beings, and here the first is
1. LOGIC, which explains and directs the powers and operations of the mind and understanding, including both *ontology* or the science of the general notion of being, with its various affections, as applied both to body and spirit; and *dialectic* or the art of the right conduct of the mind in thinking or reasoning. N. B. Tho' this is the proper place of *logic* in the order of the sciences, yet it is necessary to teach it immediately after some progress in *philology*, in order to our forming clear and just *conceptions* and *reasonings* in philosophy.
2. PNEUMATOLOGY is the doctrine of spirits or created intelligences; and here we begin with our own souls, their powers and operations, both perceptive and active: and thence

we proceed to other intelligences whether good or bad: and by analogy we gradually arise to the best conceptions we are capable of, of the Diety, the Father, Creator and Lord of all, in

3. THEOLOGY, which is the knowledge of God and His attributes, operations and dispensations in the creation and government of the world, with regard to which, and our duty, we are obliged to depend on the revelation of His mind and will; which He hath graciously made to mankind.
- II. The *practical part of moral philosophy* chiefly relates to life and conduct in our several capacities both personal and social, and this is what is more strictly called *moral philosophy*. And it consists of three parts; the chief of which, and ground of the rest is,
 1. ETHICS strictly so called, which is the art of the right conduct of our temper and behavior in all our relations towards God and man, both to ourselves and others, in order to our true and endless happiness. To which succeed
 2. ECONOMICS, which treat of the right conduct of families, and every thing that relates to them, and lastly
 3. POLITICS, which treat of the constitution and good government of cities, kingdoms, and republics. And, as good policy provides for the happiness of men, both temporal and spiritual, it must consist of two great branches, *viz. civil and ecclesiastical polity*. And the facts in the moral world are related in *biography*, and in *civil and ecclesiastical history*.

THE END

PART X

ELEMENTA PHILOSOPHICA

This is the first textbook in Philosophy published in America and was printed by Benjamin Franklin, as the reproduction of the title page opposite shows. The author's name and the citation from Bishop Berkeley did not appear in the first edition; their insertion in the copy reproduced on the opposite page is in Samuel Johnson's handwriting. No attempt has been made in the present edition to retain the original punctuation and spelling, nor has Franklin's style of printer's composition been followed.

The second half, *Ethica*, had appeared previously as *A System of Morality*. See the correspondence in Part IX.

Elementa Philosophica:

Containing chiefly;

N O E T I C A,

Or THINGS relating to the

Mind or Understanding:

A N D

E T H I C A,

Or THINGS relating to the

MORAL BEHAVIOUR.

By Samuel Johnson D.D.



*Whatever the world think He who
both not much, made it up a son the He-
man kind & the human nature may possibly make
having a character but not such a character as the King of
the world.*

P H I L A D E L P H I A:

Printed by B. FRANKLIN, and D. HALL, at the
New-Printing-Office, near the Market. 1757.

TITLE PAGE OF BENJAMIN FRANKLIN'S EDITION OF
ELEMENTA PHILOSOPHICA

Benjamin Franklin's edition of *Elementa Philosophica*, an enlargement of Johnson's *System of Morality* (first published in 1746), with a quotation from Bishop Berkeley written in Johnson's hand. This work had been written for the use of the college which was to be established in Philadel-

Elementa Philosophica: / Containing chiefly; NOETICA, / Or THINGS relating to the / Mind or Understanding: / AND ETHICA, / Or THINGS relating to the / MORAL BEHAVIOR. / By Samuel Johnson D.D. / Whatever the world thinks, he who has not much meditated upon God, the human mind, and the Summum Bonum, may possibly make a thriving earthworm, but will most indubitably make a sorry patriot, and a sorry statesman. Bp. Berkeley Siris p. 350. / PHILADELPHIA: / Printed by B. FRANKLIN, and D. HALL, at the / New-Printing-Office, near the Market. 1752.

NOETICA: / OR THE / First PRINCIPLES of KNOWLEDGE, / AND THE / Progress of the Human Mind / Towards its / HIGHEST PERFECTION.

NOETICA: / Or the First PRINCIPLES of / Human Knowledge. / BEING A / LOGIC, / Including both / METAPHYSICS and DIALECTIC, / Or the ART of REASONING. / With a brief PATHOLOGY, and an Account of the / gradual Progress of the HUMAN MIND, from / the first Dawnings of Sense to the highest / Perfection, both Intellectual and Moral, of / which it is capable. / To which is prefixed, / A Short INTRODUCTION / To the / STUDY of the SCIENCES. / O Vitæ Philosophia Dux! O Virtutum Indagatrix, Expul- / trixque Vitiorum! Unus Dies benè, & ex Præceptis tuis / actus, peccanti Immortalitati est anteposendus. / CIC. TUSC. / PHILADELPHIA: / Printed by B. FRANKLIN, and D. HALL, at the / New-Printing-Office, near the Market. 1752.

To the Right REVEREND / Father in GOD, / GEORGE, / Lord Bishop of CLOYNE, / IN / IRELAND; / THE following Essay, from / the deepest Sense of Gra- / titude. is most humbly in- / scribed, / By his Lordship's / most dutiful and obedient Son, / and most obliged humble Servant, / Jan. 6, 1752. / SAMUEL JOHNSON.

ADVERTISEMENT

As I am of the opinion, that little manuals of the sciences, if they could be well done, would be of good use to young beginners; what I aim at in this little tract, is to be as useful to them as I can, in the studies of Metaphysics and Logics, and this in order to the more particular studies of nature and morals, by giving as clear definitions as I am able in few words, of the principal matters and terms whereof those studies consist; which I have endeavored to do, in an order of thoughts, gradually arising one after another, in a manner as instructive as could well be, in so short a compass. I have also proposed to show how these studies, taking their rise from the first beginnings of sense, proceed on through the other studies, to raise the mind gradually to its highest perfection and happiness.

Tho' I would not be too much attached to any one author or system, exclusive of any others; yet whoever is versed in the writings of Bishop Berkeley, will be sensible that I am in a particular manner beholden to that excellent philosopher for several thoughts that occur in the following tract. And I cannot but recommend it to any one that would think with exactness on these subjects, to peruse all the works of that great and good gentleman (as well as those of Locke, Norris, or Malbranche and Cambray) if it were for no other reason, at least for this, that they will, in the best manner lead him to think closely, and to think for himself. And I was the rather willing to publish this logic, because I think metaphysics a necessary part of that science, and that I apprehend it a great damage to the sciences that the old metaphysics are so much neglected, and that they might be rendered the more pleasant and useful by joining with them some improvements of the moderns.

This little tract I have introduced with a short general view of the whole system of learning, wherein young students may at once behold, as it were in miniature, the objects, boundaries, ends and uses of each of the sciences; their foundation in the nature of things; the natural order wherein they lie, and their several relations and connections, both with respect to one another, and to the general end, viz. our happiness, pursued thro' them all.

This seems to me as useful in the instruction of young beginners in the sciences, as it is in teaching geography to exhibit, first of all, a general map of the whole terraqueous globe, in order to a more particular description of the several countries and kingdoms in the

following maps; or in teaching astronomy, to give first a general delineation of the whole system of the world, in order to account for the phenomena in the several particular planets in the following schemes. For, as in the natural world, one cannot have a just notion of any particular country, without considering its situation in relation to the whole globe, nor of any particular globe, without considering its situation with respect to the whole system; so in the intellectual world (if I may so call it) neither can one have a just notion of any particular science, without considering it as it stands related to the whole circle of learning, and the general end pursued through the whole. And such a short draught may also be of some use to students, to direct and methodize their thoughts, and enlarge their minds, and at the same time engage their application and industry in the pursuit of their studies.

AN INTRODUCTION TO THE STUDY OF PHILOSOPHY

Exhibiting a general view of all the parts of learning.

Quod si cuique scientiae provincia sua tribuatur, limites assignentur, principia & objecta accurate distinguantur, quae ad singulas pertinent, tractare licuerit, majore, tum facilitate, tum perspicuitate. D. Berk. De Mot.

1. Learning (which the Grecians called Cyclopaedia) implies the knowledge of every thing useful to our well-being and true happiness in this life, or our supreme happiness in the life to come. And as our happiness consists in the enjoyment of truth and good, by the right exercise of our understandings, affections, wills and active powers, it must take in every thing that relates both to theory and practice, *i. e.* both to science and art; for science is the knowledge of truth considered speculatively, and art is the knowledge of truth considered as directive of our practice for the attaining our true good and happiness. And all the various parts of learning may be reduced to these two, philology, or the study of words and other signs, and philosophy, or the study of the things signified by them. And,

2. (I.) As the understandings of young persons, for the first fifteen or sixteen years of their life, are not ripe enough to enter

into the sublimer studies of philosophy, it is necessary that during this stage they should be chiefly employed in the study of philology, or the languages, to which should be added the first things in the mathematics, both which are most level to their juvenile capacities, as they chiefly depend on the imagination and memory, which in youth are most vigorous and tenacious.

3. (1.) With regard to language, they must be early initiated in the rudiments of grammar, or the rules of speech, relating both to the accidents and connection of words, and this both in their mother tongue, and other languages, especially the French, Latin, Greek and Hebrew, in which let them go as far as may be in this first stage of life.

4. (2.) As soon as they have got a good notion of pure speech by the study of grammar, let them learn the nature of figurative speech in rhetoric: And from thence, as they go on to read the classics, let them learn the use of the various tropes and figures in oratory, which is the art of true eloquence, and explains the topics of invention, the rules of disposition or order, and of elocution or delivery. And,

5. (3.) As they go on to read the ancient historians, let them apply themselves to the study of history, considered as the art of an elegant and just narration of true matters of fact for the benefit of posterity. And that they may understand the ancients the better, they should read the best modern writers of history, which that they may read with advantage, they ought to have some easy instruction in geography and chronology, and make use of the best ancient and modern maps of those places, and tables of those times, to which their books relate, which will render what they read the more intelligible, and take the deeper impression on their memories. "History is a large field, in which they will see the wonderful series of Providence; strange turns of fortune, surprising occurrences, and amazing variety of accidents; foolish mortals laboring for trifles, contending eagerly for things they would be much happier without; some cursed in having their wishes, raised to the utmost height of power and grandeur, only to be thrown down thence with the greater obloquy and contempt; others pleasing themselves with their obscurity, and laughing at the noise and bustle that surrounds them." * All which tend to give the youth a good insight

* Vide Magazine for October, 1748.

into human nature, and lead them to true wisdom in their own conduct.

6. (4.) As they go on to read the poets, they should get some knowledge of poetry, considered as an art, being a just and lively description of things or persons, either real or imaginary, with an elevation and dignity of thought, and with the advantages of numbers and harmony, and every kind of ornament that language is capable of, which will qualify them the better to entertain themselves with those great masters of wit and eloquence. "There is something charming in verse; something that strikes the ear, moves the soul, rouses the passions, and engages the affections," while it fills the soul with the most useful instructions, attended with the most exquisite delight. "It seems to have been the first way of writing, and in some countries even older than letters, and consequently to have been the voice of infant nature in her early bloom and native sweetness. In it the ancients explained their sentiments, conveyed their laws, and delivered their precepts of morality in fable; the people liked the instructions which came to them attended with delight; and as they heard them with pleasure, so they retained them with ease." To this head of language belongs the art of criticism, which teaches the true force of words and phrases, the nature of style, and a true taste, so as to make a right judgment of authors and the beauties and excellencies of any performance in either of these kinds of writings.

7. While youth are acquainting themselves with the rudiments of eloquence, history and poetry, they should also be learning the first and earliest things in the mathematics (which indeed, as well as words, do in some measure belong to the doctrine of signs) especially things that relate to practice, both in arithmetic and geometry, which will very much tend to engage and strengthen their attention, enlarge their capacities, and ripen their minds. And something of natural history, with the arts of drawing and music, if they have a taste for it, will be very pleasant and useful amusements. And these studies which they have begun in this first period, and (it is to be hoped) made a considerable progress in, must be afterwards continued and carried to further perfection, and made their diversion at turns, while they

8. (II.) Proceed, secondly, to the further improvement of their understandings and active powers, in the sublimer studies of phil-

osophy, which is the study of truth and wisdom, or the knowledge of things, as being what they really are, together with a conduct correspondent thereunto, in the pursuit of true happiness; to which they must go on when they are sixteen or seventeen years old. "And what concerns us in these more exalted studies is, that we be very exact and careful to attend more to things than words, and endeavor to make such things our own as will prove real accomplishments to our minds, and duly regulate both our tempers and manners; and such are the knowledge of God and ourselves, for *philosophia est rerum divinarum humanarumque scientia*, as Tully defines it, and comprehendeth every thing, both speculative and practical, upon these large and comprehensive subjects."

9. The first, which relates to God, takes in the whole creation; the full extent of being; for by the contemplation of the effects we arise to the cause. "And as by considering that wonderful and amazing power, that all-comprehending wisdom, that inimitable beauty, that surprising harmony, that immutable order, which abundantly discover themselves in the formation and government of the universe, we are led to their divine Original, who is the inexhausted source, the glorious fountain of all perfection;" so by making due reflections on the operations of our own minds, and the large extent of our intellectual faculties and their objects; their several distinct exertions, and their subserviency to each other; the free activity of our souls, and the various passions that put them on action for attaining our several ends; and the various ways wherein they exert themselves, and exercise their dominion over our bodies; we may attain, in some good measure, the knowledge of ourselves, as well as of God, our chief Good, and the certain means we must use, and the method we must take to secure our true happiness in the enjoyment of Him, ourselves, and one another. In order to the raising our minds to these sublime speculations, and to regulate our actions in these noble pursuits, it is necessary that we be able to form to ourselves clear ideas and conceptions of those beings or things on which we contemplate, whether bodies or spirits: to the attainment of which,

10. (1.) Logic, or the art of reasoning, is very requisite, the foundation of which is metaphysics, or the *philosophia prima*, which, by some, hath been called ontology, and is the noblest and most elevated part of science. It begins with sensible objects, and

from them takes its rise to things purely intellectual, and treats of being, abstracted from every particular nature, whether body or spirit, and of all the general distinctions, connections and relations of things, whether sensible or intellectual, and so lays a foundation for clear and just reasoning, while we proceed upon stable and unerring principles. Which foundation being laid, logic teacheth us the rules of thinking regularly, and reasoning justly, whereby we learn to distinguish truth from falshood, and proceed from things simple to things compound, and from things precarious and contingent to things necessary, stable and eternal, which therefore will result in the clearest and justest views, both of all other things, and of the adorable excellencies of the divine nature, that our little minds are capable of.

11. (2.) From these general principles and laws of reasoning we proceed to the application of them, first in the study of quantity in general, whether number or magnitude, in the sublimer mathematics, or the arts of computation. And here again opens a noble scene of eternal truth, in the demonstration of a vast number of theorems and problems, both arithmetical and geometrical, to which algebra is wonderfully subservient, in the contemplation both of lines, surfaces and solids, in all their endless varieties and proportions; which will enable us to proceed with the greater advantage in the study of nature, and without which we cannot read with understanding the best things that have been written on that subject. This sort of study hath likewise a direct tendency to lead us to an admiring sense of the Deity, in whose infinite treasures of eternal truth, we behold these connections and demonstrations, who hath made all things in number, measure and weight. To this head belong, trigonometry, geodesia, stereometry, the doctrine of the sphere and cylinder, and of conic sections and fluxions.

12. (3.) From the contemplation of quantity in the abstract, we go on next to the consideration of it in concrete, or in the objects of sense, *i. e.*, as blended with the other sensible qualities, in the endlessly various bodies that compose this mighty frame of heaven and earth, and the principles and laws of motion, on which their phenomena depend, which are the subjects of physics or natural philosophy: the foundation of which is mechanics, which explain the nature of bodies in general, and the forces by which they move; and demonstrate the various laws of their motion. To which belong

statics, hydrostatics and pneumatics. Upon which we proceed in geology, or physics, strictly so called, to contemplate this globe of earth, in all its parts and furniture; the elements, fire, air, water and earth; the stones, mines, minerals, meteors, plants, and animals, and particularly the wonderful structure of our own bodies. Here therefore belong, optics, music, geography, navigation and commerce; lithology, metallology and meteorology, agriculture, chemistry and botanics, anatomy, surgery and medicine, and every thing useful in life. And, lastly, from the earth we launch forth into the vast and unmeasurable ether, and in astronomy we contemplate the heavens and stars, both fixed and erratic; and particularly our sun, with his splendid chorus of planets and comets, with their orbits, magnitudes and densities, and the laws of their motions in the tides of their fluids, and their diurnal and annual revolutions: to which belong chronology and dialling. And the facts in all nature are related in natural history. "All which open upon us an amazing scene, in which nature displays her surprizing phenomena, and invites us heedfully to consider her wonderful productions, and trace out infinite wisdom, power and goodness, thro' the immense spaces, from the heights above to the depths below, from the glorious orbs which roll over our heads, to the minutest insects that crawl under our feet, and even things either vastly minute or distant that escape the ken of our naked eye. From all which we are led to behold, acknowledge, admire and adore the great author of all things." And this prepares us,

13. (4.) To proceed a step higher, and from the sensible or natural world, to go on to the contemplation of the intelligent or moral world; from the world of bodies, to the world of spirits, which, as such, being intelligent and moral agents, are the great subject of ethics, or moral philosophy. The foundation of which is pneumatology, or the doctrine of spirits; in which, we begin with our own souls, their powers and operations, both perceptive and active; and thence proceed to other orders of intelligences, and so gradually rise to the more particular contemplation of the Deity, the great father of spirits, and the supreme lord and governor of the whole creation, which is called theology. And when we have learned just notions of Him and ourselves, we from thence demonstratively deduce the great principles of that duty which we owe to Him, ourselves and one another (which opens another glorious

scene of eternal truth) the performance of which, doth, in the nature of it, tend to our highest perfection and happiness. All which great branches of duty are the subject of ethics (strictly so called) which is the art of living happily by the universal practice of virtue. But these things will be best learned from the sacred volumes, the design and business of which is to explain and enforce the great principles of theology and morality by divine revelation; particularly "our blessed Saviour hath exalted ethics to the sublimest pitch, and his admirable Sermon in the Mount is the noblest and exactest model of perfection."

14. (5.) Ethics explain the laws of our duty as we are men in general, and which indeed are the eternal and immutable laws of right that equally bind all intelligent creatures. But as we cannot well subsist without being combined into particular societies: and as societies are of two kinds; the one founded in nature, *viz.* families, the other in compact, *viz.*, civil governments: hence spring two other branches of moral philosophy, *viz.*, economics, which relate to the regulation of families; and politics, which treat of the constitution and good government of cities, kingdoms and republics. And as good policy provides for every thing that may contribute to the public good and happiness of mankind, it does, in effect, comprehend and sum up the whole of philosophy. And, lastly, as it provides for the happiness of men, both temporal and spiritual, both with regard to this life, and that which is to come, it must consist of two great branches, *viz.*, civil and ecclesiastical polity. And the facts in the moral world are related in biography, and in civil and ecclesiastical history. The whole may be seen in one view in the following table.

THE TABLE

LEARNING is the knowledge of every thing that may contribute to our true happiness, both in theory and practice, and consists of two parts.

I. Philology, or the study of words and other signs, and is,

1. General or common to all kinds of speaking, in

2. Special, or of particular kinds of speaking or writing, as,

1. Grammar, of pure language.

2. Rhetoric, of figurative speech.

1. Oratory, which treats of true eloquence.

2. History, which relates real facts.

3. Poetry, which describes things, either real or imaginary. To all which belongs the Art of criticism.

1. Rational, in metaphysics and logic, which cultivate our rational powers.

2. Mathematical, which teach us to reason on abstract quantity, number and magnitude, in arithmetic and geometry, the arts of numbering and measuring.

II. Philosophy, or the study of the things signified by them, whether bodies or spirits, or any thing relating to them, and is,

1. General or common to all kinds of beings, and is,

2. Special or peculiar to each kind of beings, and is,

1. Natural, which teacheth the knowledge of the natural world, or of bodies, in mechanics, physics and astronomy, which explain the phenomena both in heaven and earth.

2. Moral, which teacheth the knowledge of the moral world or spirits, and is

1. Speculative in pneumatology and theology, of spiritual beings, and especially God the father of all.

2. Practical, in 1. ethics, of behavior in general. 2. economics, of the conduct of families. And 3. politics, of the government of states, civil and ecclesiastical.

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- 9. Of Reading and Writing
- 10. Of Music, Numbers, Figures, Maps, Globes, &c.
- 11. Of Grammar, Languages, Oratory, History, Poetry, &c.
- 12. Of Metaphysics, Logic and Criticism
- 13. Of Mathematics, and the fine Arts, Sculpture, Painting and Architecture
- 14. Of Physics and Astronomy
- 15. Of Theology and Morals
- 16. Of Economy and Politics
- 17. Of the Intent and Usefulness of Revelation, in improving and advancing us to our highest Perfection and Happiness

NOETICA :

Or the first principles of Metaphysics and Logic. Together with the Progress of the Human Mind towards its Perfection.

CHAP. I

Of the Mind in general, its Objects and Operations.

§ 1. It is my design in the following essay, to trace out, in as short a compass as I can, the several steps of the The Design. mind of man, from the first impressions of sense, through the several improvements it gradually makes, till it arrives to that perfection and enjoyment of itself, which is the great end of its being. In order to which, it will first be expedient to define what we mean by the human mind, and to give some account of its various objects, powers and operations, and the principles and rules by which they are to be conducted in attaining to the knowledge of truth, which is the business of that science which is called Logic, or The Art of Thinking or Reasoning; the foundation of which is the *philosophia prima*, which is also called metaphysics and ontology, or the doctrine of the general notion of being, with its various properties and affections, and those applied in general both to body and spirit. And as truth and good are nearly allied, being in effect but the same thing under different considerations; this will pave the way towards the attainment of that supreme good, in the choice and enjoyment of which consists our highest happiness; the particular consideration of which is the business of ethics, or moral philosophy, which is the art of pursuing our highest happiness by the universal practice of virtue.

§ 2. The word mind or spirit, in general, signifies any intelligent active being; which notion we take from what we are The Defini- conscious of in ourselves, who know that we have tion of within us a principle of conscious perception, intelligence, activity and self-exertion; or rather, that each Mind. of us is a conscious, perceptive, intelligent, active and self-exerting being: and by reasoning and analogy from ourselves we apply it to all other minds or intelligences besides, or superior to

us; and (removing all limitations and imperfections) we apply it even to that Great Supreme Intelligence, who is the universal Parent of all created spirits, and (as far as our words and conceptions can go) may be defined, an infinite Mind or Spirit, or a Being infinitely intelligent and active. But by the human mind, we mean that principle of sense, intelligence and free activity, which we feel within ourselves, or rather feel ourselves to be, furnished with those objects and powers, and under those confinements and limitations, under which it hath pleased our great Creator to place us in this present state.

§ 3. We are, at present, spirits or minds connected with gross, tangible bodies, in such a manner, that as our bodies, Of the Union can perceive and act nothing but by our minds, so, of Body and on the other hand, our minds perceive and act by Mind. means of our bodily organs. Such is the present law of our nature, which I conceive to be no other than a mere arbitrary constitution or establishment of Him that hath made us to be what we are. And accordingly I apprehend that the union between our souls and bodies, during our present state, consists in nothing else but this law of our nature, which is the will and perpetual fiat of that infinite Parent Mind, who made, and holds our souls in life, and in whom we live, and move, and have our being, *viz.* that our bodies should be thus acted by our minds, and that our minds should thus perceive and act by the organs of our bodies, and under such limitations as in fact we find ourselves to be attended with.

§ 4. The immediate object of these our perceptions and actions we call ideas; as this world has been commonly defined and used by the moderns, with whom it signifies Definition any immediate object of the mind in thinking, of Idea, No- whether sensible or intellectual, and so is, in effect, tion, etc. synonymous with the word thought, which comprehends both. Plato, indeed, by the word idea, understood the original exemplar of things, whether sensible or intellectual, in the eternal mind, conformable to which all things exist; or the abstract essences of things, as being originals or archetypes in that infinite intellect, of which our ideas or conceptions are a kind of copies. But perhaps, for the more distinct understanding ourselves upon this subject, it may be best to confine the word idea to the immediate ob-

jects of sense and imagination, which was the original meaning of it; and to use the word notion or conception, to signify the objects of consciousness and pure intellect, tho' both of them may be expressed by the general term thought; for these are so entirely, and *toto cælo* different and distinct one from the other, that it may be apt to breed confusion in our thoughts and language, to use the same word promiscuously for them both; tho' we are indeed generally obliged to substitute sensible images and the words annexed to them, to represent things purely intellectual; such, for instance, are the words, spirit, reflect, conceive, discourse, and the like.

§ 5. Our minds may be said to be created mere *tabulæ rasæ*; *i. e.*, they have no notices of any objects of any kind properly created in them, or concreated with them: yet of our Ideas. I apprehend, that in all the notices they have of any kind of objects, they have an immediate dependence upon the Deity, as really as they depend upon Him for their existence; *i. e.* they are no more authors to themselves of the objects of their perceptions, or the light by which they perceive them, than of the power of perceiving itself; but that they perceive them by a perpetual intercourse with that great Parent Mind, to whose incessant agency they are entirely passive, both in all the perceptions of sense, and in all that intellectual light by which they perceive the objects of the pure intellect. Notwithstanding which, it is plain from experience, that in consequence of these perceptions they are entirely at liberty to act, or not to act, and all their actions flow from a principle of self-exertion. But in order the better to understand these things, I must more particularly define these terms. And, as all the notices we have in our minds derive to them originally from (or rather by means of) these two fountains, sense and consciousness, it is necessary to begin with them.

§ 6. By sense, we mean, those perceptions we have of objects *ab extra*, or by means of the several organs of Of the Senses. our bodies. Thus, by feeling or touch, we perceive an endless variety of tangible objects, resistance, extension, figure, motion, hard, soft, heat, cold, &c. By sight we perceive light and colors, with all their endlessly various modifications, red, blue, green, &c. By hearing, we perceive sounds: by tasting, savors: by smelling, odors, &c. These are called simple ideas. And of these, sorted out into a vast variety

of fixed combinations, or compound ideas, distinct from each other, and in which they are always found to co-exist, consists every sort and individual body in nature, such as we call man, horse, tree, stone, apple, cherry, &c. And of all these various distinct combinations or compounds, connected together in such a manner as to constitute one most beautiful, useful and harmonious whole, consists what we call universal nature, or the entire sensible or natural world.

§ 7. In the perception of these ideas of objects of sense, we find our minds are merely passive, it not being in our power (supposing our organs rightly disposed and are passive. situated) whether we will see light and colors, hear sounds, etc. We are not causes to ourselves of these perceptions, nor can they be produced in our minds without a cause; or (which is the same thing) by any imagined unintelligent, inert, or unactive cause (which indeed is a contradiction in terms) from whence it is demonstration that they must derive to us from an Almighty, intelligent active cause, exhibiting them to us, impressing our minds with them, or producing them in us; and consequently (as I intimated) it must be by a perpetual intercourse of our minds with the Deity, the great Author of our Beings, or by His perpetual influence or activity upon them, that they are possessed of all these objects of sense, and the light by which we perceive them.

§ 8. These ideas or objects of sense are commonly supposed to be pictures or representations of things without us, and indeed external to any mind, even that of the Deity himself, and the truth or reality of them is conceived to consist in their being exact pictures of things or objects without us, which are supposed to be the real things. But as it is impossible for us to perceive what is without our minds, and consequently, what those supposed originals are, and whether these ideas of ours are just resemblances of them or not; I am afraid this notion of them will lead us into an inextricable scepticism. I am therefore apt to think that these ideas, or immediate objects of sense, are the real things, at least all that we are concerned with, I mean, of the sensible kind; and that the reality of them consists in their stability and consistence, or their being, in a stable manner, exhibited to our minds, or

produced in them, and in a steady connection with each other, conformable to certain fixed laws of nature, which the great Father of Spirits hath established to Himself, according to which He constantly operates and affects our minds, and from which He will not vary, unless upon extraordinary occasions, as in the case of miracles.

§ 9. Thus, for instance, there is a fixed stable connection between things tangible and things visible, or the immediate objects of touch and sight, depending, as I conceive, immediately upon the permanent, most wise and almighty will and fiat of the great creator and preserver of the world. By which, neither can it be meant, that visible objects are pictures of tangible objects (which yet is all the sense that can be made of our ideas of sense being images of real things without us) for they are entirely different and distinct things; as different as the sounds, triangle, and the figure signified by it; so different, that a man born blind, and made to see, could have no more notion that a visible globe hath any connection with a tangible globe, by mere sight, without being taught, than a Frenchman that should come in England, and hear the word, man, could imagine, without being taught, that it signified the same thing with the word, *homme*, in his language. All that can be meant by it, therefore, is, that, as tangible things are the things immediately capable of producing (or rather, being attended with) sensible pleasure or pain in us, according to the present laws of our nature, on account of which they are conceived of as being properly the real things; so the immediate objects of sight or visible things, are always, by the same stable law of our nature, connected with them, as signs of them, and ever correspondent and proportioned to them; visible extension, figure, motion, &c. with those of the tangible kind, which go by the same names; and so in the compounds or combinations of them; the visible man, horse, tree, stone, &c. with those of the tangible kind, signified by the same names.*

§ 10. Not that it is to be doubted but that there are archetypes of these sensible ideas existing, external to our minds; but then they must exist in some other mind, and be ideas also as well as ours; because an idea can resemble nothing but an idea; and an idea ever implies in the

* See Bp. Berkeley's Theories of Vision, Principles of Human Knowledge, and Three Dialogues.

very nature of it, relation to a mind perceiving it, or in which it exists. But then those archetypes or originals, and the manner of their existence in that eternal mind, must be entirely different from that of their existence in our minds; as different, as the manner of His existence is from that of ours: in him they must exist, as in original intellect; in us, only by way of sense and imagination; and in Him, as originals; in us, only as faint copies; such as he thinks fit to communicate to us, according to such laws and limitations as he hath established, and such as are sufficient to all the purposes relating to our well-being, in which only we are concerned. Our ideas, therefore, can no otherwise be said to be images or copies of the archetypes in the eternal mind, than as our souls are said to be images of Him, or as we are said to be made after his image.*

§ 11. Thus much for sense. — By consciousness is meant, our perception of objects *ab intra*, or from reflecting or turning the eye of our mind inward, and observing what passeth within itself; whereby we know that we Of Consci- perceive all those sensible objects and their connec- ousness, tions, and all the pleasures and pains attending them, Imagination and Memory. and all the powers and faculties of our minds employed about them. Thus I am conscious that I perceive light and colors, sounds, odors, savors, and tangible qualities, with all the various combinations of them; and that of these, some give me, or rather are attended with pain or uneasiness, others with pleasure or ease, and the comfortable enjoyment of myself. I find moreover, that when I have had any perception or impression of sense, I retain a faint image of it in my mind afterwards, or have a kind of internal sense or remembrance of it; as having seen the sun, a flower, a horse, or a man, I retain the image of their figure, shape, color, &c. afterwards. Thus I have now a faint idea of the sun at midnight, and of a rose in winter: I know how such a tree, such a horse, or such a man looks, tho' I have neither of them before my eyes. This power of the mind is called imagination and memory, which implies a consciousness of the original impression (tho' indeed the word memory may imply the recollection of intellectual as well as sensible objects, but chiefly those by means of these, which is also called reminiscence) and these ideas of the imagination may be truly said to be images or pictures of the ideas or immediate ob-

* See on this head, Norris's Ideal World. Part I.

jects of sense. We are moreover conscious of a power whereby we can not only imagine things as being what they really are in nature, but can also join such parts and properties of things together, as never co-existed in nature, but are mere creatures of our minds, or chimeras; as the head of a man with the body of an horse, etc., which must also be referred to the imagination, but as influenced by the will.

§ 12. But besides these powers of sense and imagination, we are conscious of what is called the pure intellect, or the power of conceiving of abstracted or spiritual objects, and the relations between our several ideas and conceptions, and the various dispositions, exertions and actions of our minds, and the complex notions resulting from all these; of all which we cannot be properly said to have ideas, they being entirely of a different kind from the objects of sense and imagination, on which account I would rather call them notions or conceptions. And they are either simple, such as perception, consciousness, volition, affection, action, &c., or complex, as spirit, soul, god, cause, effect, proportion, justice, charity, &c. And of all these, and what relates to them, consists the entire spiritual or moral world. But in order the better to understand or conceive of these, it is necessary more particularly to pursue and explain these intellectual and active powers, whereof we are conscious within ourselves; such as, 1. The simple apprehension of objects, and their several relations, connections and dependencies, arising from our comparing our ideas and conceptions one with another. 2. Judging of true or false, according as things appear to agree or disagree, to be connected or not connected one with another; and 3. Reasoning or inferring one thing from another, and methodising them according to their connections and order: all which are the subject of logics. To which succeed, 1. Affecting or disaffecting them according as they appear good or bad, agreeable or disagreeable to us, *i. e.*, attended with pleasure or uneasiness. 2. Willing or nilling, choosing or refusing according as we affect or disaffect them. 3. Liberty of acting, or forbearing to act in consequence of the judgment and choice we have made of them: all which are the subject of ethics. It is necessary to define all these terms, and give some account of these several acts and exertions of our minds (which, as well as those of sense, consciousness, ima-

gination and memory above-mentioned, are only so many modifications of them) in order to what is next to follow.

§ 13. But before I proceed, I would, in order thereunto, first observe, that no sooner does any object strike the senses, or is received in our imagination, or apprehended by our understanding, but we are immediately conscious of a kind of intellectual light within us (if I may so call it) whereby we not only know that we perceive the object, but directly apply ourselves to the consideration of it, both in itself, its properties and powers, and as it stands related to all other things. And we find that as we are enabled by this intellectual light to perceive these objects and their various relations, in like manner as by sensible light we are enabled to perceive the objects of sense and their various situations;* so our minds are as passive to this intellectual light, as they are to sensible light, and can no more withstand the evidence of it, than they can withstand the evidence of sense. Thus I am under the same necessity to assent to this, that I am or have a being, and that I perceive and freely exert myself, as I am of assenting to this, that I see colors or hear sounds. I am as perfectly sure that $2+2=4$, or that the whole is equal to all its parts, as that I feel heat or cold, or that I see the sun when I look full on it in the meridian in a clear day; *i. e.*, I am intuitively certain of both. This intellectual light I conceive of as it were a medium of knowledge, as sensible light is of sight: in both there is the power of perceiving, and the object perceived; and this is the medium by which I am enabled to know it. And this light is one, and common to all intelligent beings, and enlighteneth alike every man that cometh into the world, a Chinese or Japanese, as well as an European or American, and an angel as well as a man: by which they all at once see the same thing to be true or right in all places at the same time, and alike invariably in all times, past, present, and to come.

§ 14. Now if it be asked, whence does this light derive, whereby all created minds at once perceive, as by a common standard, the same things alike to be true and right. I answer, I have no other way to conceive how I come to be affected with this intuitive intellectual light, whereof I am conscious, than by deriving it from the universal presence and action of the Deity, or a perpetual communication with the

* This is Plato's Doctrine, in his Rep. 6, &c.

great father of lights,* or rather his eternal word and spirit, exhibiting and impressing. For I know I am not the author of it to myself, being passive and not active with regard to it, tho' I am active in consequence of it. Therefore, tho' I cannot explain the manner how I am impressed with it (as neither can I that of sense) I do humbly conceive that God does as truly and immediately enlighten my mind internally to know these intellectual objects, as he does by the light of the sun (his sensible representative) enable me to perceive sensible objects. So that those expressions are indeed no less philosophical than devout, that God is light, and in his light we see light. And this intuitive knowledge, as far as it goes, must be the first principles, from which the mind takes its rise, and upon which it proceeds in all its subsequent improvements in reasoning, and discovering both truth in speculation, and right in action; so that this intellectual light must be primarily and carefully attended to, if we would avoid and be secure from either error or vice. Nor must this manner of thinking be suspected to savor of enthusiasm, it being the settled course or law of nature, according to which the great parent mind enlighteneth us; and that in things, in their own nature capable of clear evidence; whereas enthusiasm implies an imaginary, as revelation is a real and well-attested adventitious light, above and beyond the settled law or course of nature, discovering truths not otherwise knowable, and giving directions, or enjoining rules of action in things arbitrary, or matters of mere institution. And from this intuitive intellectual light it is (as I conceive) that we derive what we call taste and judgment, and, with respect to morals, what some call the moral sense or the conscience, which are only a sort of quick intuitive sense or apprehension of the decent and amiable, of beauty and deformity, of true and false, and of right and wrong, or duty and sin: and it is the chief business of culture, art and instruction, to awaken and turn our attention to it, and assist us in making deductions from it.

* See the Archbishop of Cambray, on this Subject, in his *Demonstration of the Existence of God*. And Norris or Malbranche & Cudworth's *Int. Syst.* p. 736. Ed. 1743, and his *Eternal and Immutable Morality*, p. 250-260.

CHAP. II

Of the mind simply apprehending, and of its objects more particularly.

§ 1. Let us therefore proceed to define the several acts and objects of the pure intellect thus enlightened. And first, of the simple apprehension and its Objects. the simple apprehension of objects or beings, and the various conceptions arising to our view from the consideration of their natures and affections, and their several relations, connections and dependencies, such as cause and effect, essence and existence, things possible and impossible, necessary and contingent, finite and infinite, perfect and imperfect, truth and good, beauty and harmony, substances and accidents, subjects and adjuncts, time and place, whole and parts, unity and multiplicity, number and order, identity and diversity, things agreeing and opposite, equal and unequal, like and unlike, denomination and definition, individuals and abstraction, kinds and sorts, bodies and spirits; and lastly, of metaphor and analogy from things sensible to things spiritual, and from things human to things divine. Of all which I shall treat in the order as they are here enumerated.

§ 2. As soon as the mind is possessed of any variety of objects, being assisted with that inward intellectual light Of Being above-mentioned, deriving, and, as it were, perpetually in general. beaming forth from the great Fountain of all Light, both sensible and intellectual, it immediately falls to contemplating its ideas and conceptions, and comparing them one with another. And here, the first thing it is enlightened to know or be conscious of, is, its own existence from the existence of its perceptions and exertions and their objects, which it conceives of as real beings or things, whence it gets the notion of being in general. But even this first object of its knowledge it is made to know from that first principle of intellectual light, flowing from the parent mind, that perception and action, and being perceived or acted upon, implies existence, of which principle it has an inward intuitive sense and certainty. Hence it immediately infers, I perceive and act, therefore I am: I perceive such an object, therefore it is, &c. Not that its existence depends on my mind, but on that mind by whom I am enabled to perceive it. And as perceiving and acting, and being perceived and acted upon, implies existence or being, so

it is a contradiction for the same thing to be and not to be at the same time, for that would be to perceive and not perceive, to act and not to act, and to be perceived and not perceived, and acted upon and not acted upon, at one and the same time. And from these definitions arise that first great distinction of being into spirit and body, whereof the existence of the first consists in perceiving and acting, and that of the other in being passively perceived and acted. And here, to perceive or to act is called the power, and what is perceived or acted upon, is called the object. So that by being, is meant, what really is or exists, in opposition to what is merely fictitious or imaginary; a creature of our own minds, and not of Him that made and enables us to perceive and act.

§ 3. Now of every thing that is, it must be said, either, that it always was, or, that it began to be. If it always was, Of the first or never derived from the power of any other being, Being and it must be independent of every other being what- eternal soever, and consequently must exist absolutely by the Truth intrinsic necessity of its own nature, or be a necessarily existent being (and all other beings must depend on its will and power, otherwise they could never have been, or continue to be; and itself, being derived from no other being, and dependent on none, it must be out of the power of any other being to limit or control it, and consequently it must be infinite and eternal; *i. e.*, must have all reality. perfection and fulness of being, without any regard to time or place: for that must be infinite, that has, and can have no possible bounds or limitations; and that must be eternal, that is, and always was, and will be, and can't but be; and such a being must be all in all; all reality and excellency. Nor can there be more than one such being, who is being itself, because it is a manifest contradiction that two or more beings should, each have in it, or consist of, all possible reality and perfection. He must therefore be a perfect unity, the το ἓν, and the το ὅν, and the ὁ ὄντως ὢν, as the ancients called Him, which is the true import of the original sacred names Jah and Jehovah. And He is also called truth and good: Truth itself, as He is all reality; and good itself, as He is all perfection and excellency. And He is truth as He is infinitely intelligible, and good as He is infinitely eligible, containing within and of Himself, all that can contribute to render Himself happy, as well as all other perceptive,

conscious, active beings, dependent on Him. In this necessarily existent and eternal being or mind must originally exist all those necessary and eternal truths with which our minds are furnished, either by intuition or demonstration; such as these, that perception and action imply existence: that what begins to be, must have a cause: that the whole is equal to all its parts: that all the rays of a circle are equal: that what is right or wrong in another towards me, must be equally right or wrong in me towards him, &c. We know that these and the like eternal truths do not depend on our minds, or the actual existence of things, but must have an eternal and necessary existence, antecedent to our knowledge of them, and independent of it, or of any particular existence. And as we can have no notion of truth without a mind perceiving it, their necessary and eternal existence must infer the necessary existence of an eternal mind; and consequently, it must be in that eternal mind that we behold them, or rather by our communication with Him that we are enlightened with the knowledge of them. In Him they must exist as one archetypal and eternal Light of truth; but as they are from Him reflected on the various objects in our finite minds, they appear various and manifold, as sensible light is one in the sun, tho' it becomes various colors and other sensible qualities in different objects.

§ 4. On the contrary, whatever being began to be, must have had a cause, and depend on some other being for its existence. By the word cause, we mean, that being by whose design and activity, force or exertion, another being exists: and that being which exists by the design, force, action, or exertion of another, is called an effect; what is called an effect therefore must be supposed not to have existed, and consequently to have had a beginning of existence, or at least a dependent existence, and must therefore have had a cause, by the force or activity of which it came into existence, and without which it would not have been. And this must be the case of every thing that is, till you come to a first cause, *i. e.*, to a being that never had a beginning, or any dependent existence, but exists by the absolute necessity of its own nature, having an original perfect fulness of being in and of itself, without depending on any other being, and deals out being and perfection to all other beings, in various measures and degrees as pleaseth him. And such a being there must be, otherwise nothing could ever have been, unless you

suppose a thing to be its own cause, *i. e.*, to act before it is, which is impossible; or unless you suppose an infinite succession of causes and effects, which in effect would be an infinite effect without any cause at all.* But an effect without a cause, is a contradiction in terms; for by the definition, to every thing that is produced, there must be a correspondent power adequate to the production of it, or an active force sufficient to produce it. And here, the thing existing is said to be a thing in act; and as the force producing adequate to the effect, is called the power, so the effect not yet produced, is said to be in power, or *in fieri*, and the being which exerts that power, we call an agent and active, and that on or in which the force terminates, we call a patient and passive.

§ 5. There are indeed many things that occur to our senses and thoughts, that appear at first sight to be agents Of real and or causes, which, strictly speaking, are not so, as apparent Causes. we find upon a more exact scrutiny, though they are vulgarly so called. Thus we say, the sun moves, rises and sets, when yet upon a more thorough enquiry, we find, it is not the action of the sun, but these appearances are occasioned by the motion of the earth, and that they are only mere passive appearances in our minds. So we say, the fire burns; the sun warms, enlivens, ripens the fruits, &c., and we call the parent the cause of his offspring; whereas, upon a more strict enquiry, we find that he is by no means the adequate cause; and that the sun, and (what we call) other natural causes, are in themselves but mere passive inert beings, connected one with another, according to the established laws of nature; so that being things merely passive and inert, they cannot, properly speaking, be the causes of the effects vulgarly ascribed to them; they must therefore be called only signs, occasions, means, or instruments, and we must look for some other being in whom resides, and by whom must be exerted, that adequate power or force by which the effect is truly produced, which therefore is the true and real cause; and the other can only be called the apparent causes, having no real efficiency or activity in the production of the effect.

* See *Wollaston's Rel. of Nat.* p. 65, &c.

§ 6. Moreover we find from what we experience in ourselves, that we breathe and our blood circulates without any design or activity of ours; and the course of natural Causes continues without us, goes on whether we will or not, and even tho' we should exert our utmost force to withstand it. These, with regard to us, may be called necessary effects, as not depending on our will and power; tho' with regard to the true Author of Nature, they are free and voluntary effects. On the other hand, we walk, speak, write, etc. from a principle of conscious designed self-exertion, and voluntary activity; these therefore are called free or voluntary effects with regard to us, which we produce or not, as we please; in doing which we are voluntary causes. Hence we learn to make the distinction between necessary and voluntary, or free causes and effects. So that by voluntary effects, we mean, such as are produced by a free voluntary cause acting from a principle of conscious design and self-exertion, exciting a force of its own, or from within itself, which it chooseth to exert, and might do otherwise; and this is properly called a cause, an efficient cause or agent. And as to those natural effects abovementioned, of which the apparent is not the real cause, having neither design nor force in itself (as the water in turning a mill) but is rather acted than acts; however necessary they are with regard to us, yet from the most wise design and contrivance manifestly appearing in the effects themselves, we evidently discern that the being who is their true and adequate cause, must be furnished with wisdom and power equal or sufficient for the production of them, and must act from a principle of free self-exertion, and with a design or view at some certain end proposed to himself in acting, and therefore be a free intelligent and voluntary cause, for nothing can give what it hath not.

§ 7. Whence it appears, that only intelligent active beings or spirits, can be truly efficient causes, which alone are properly called causes, and that when we speak of natural causes, it is only in accommodation to vulgar apprehensions, since they are merely passive, and act, or rather are acted, without any design or exertion of their own. And as to what are commonly called final causes, they are only the views or motives, determining the design or purpose of the efficient cause, but have properly no causality or activity in them-

selves. We are conscious, when we produce any effect, that we act with some end, view, or design, which determineth us, or rather, properly speaking, upon the view of which we determine ourselves, to act so rather than otherwise, and to choose and make use of such and such means, rather than others, as being most fit and useful in order to accomplish our end; and therefore we say, he that wills the end, must will the means conducing to the attainment of it; the effect to be produced being the ultimate end, and the means the subordinate ends which we have in view. And herein consists the proper notion of wisdom, *viz.*, in the right judgment and choice of ends and means; the best ends and the fittest means; and in a vigorous activity in the application of the means in order to attain the end. Thus it is in human affairs; and from what we observe in the course of nature, in which there is an evident subordination of ends and means, we unavoidably infer that there must be something analogous to this in the author of it, not because he needs means for himself, but that he may make the series or course of nature the more intelligible and instructive to us. Hence the best part of the study of nature must consist in the discovery, as far as we are able, of what are called final causes; *i. e.*, of the plain signatures of design and contrivance, and the dependance and connection of ends and means.

§ 8. In artificial effects, or those produced by man, as in building, etc., by reason of our impotence we need matter to
 Of Matter work upon, and a form or model to work by, according
 and Form. to which the effect, being framed or formed out of the
 pre-existent materials, is said to consist of matter and
 form, which have also been reckoned among the causes, and they may each be called *causa sine quâ non*, as the schoolmen used to speak; but they cannot be properly called causes, as having no force or design in producing the effect; we may, however, from hence, by analogy, in speaking of other things, advantageously make the use of what is called, the *ratio materialis*, and *formalis* of things in nature, and even of things purely intellectual. And because we need matter and form in producing artificial effects, we are apt to think, or at least to speak as tho' we thought, this the method of the Almighty in producing natural effects, but this is owing to our weakness, whereby we are apt to measure Him by ourselves. Indeed he may be said to have a form, idea, or archetype in his infinite,

all-comprehending Mind, conformable to which he acts; but this can mean no more than that all things which he produceth are always present with Him, and perfectly known to Him, with all their relations and connections, antecedent to their production, and that He produceth them conformable to His own knowledge, design and contrivance, being the plan which he hath formed. And that existence of things in the divine eternal Mind (if it may be so called) as being perfectly known to Him, antecedent to their production, is called their Archetypal State; and their existence in *rerum natura*, as being actually produced by His will and power, and thereby perceived and known to us, is called their Ectypal State.

§ 9. To this head therefore belongs the distinction between the essence of things, and their existence. By their Of Essence, and essence, we mean those constituent principles, Existence. properties and powers in them, which are necessary to their nature, as being what they are, whether considered only as conceived in the mind of an intelligent being, or existing in *rerum natura*. Thus the essence of gold consists in its color, weight, fixedness, ductility, solubility in *aqua regia*, or whatever properties are always found to co-exist in that sort of body which we call gold, and no other. So the essence of a rose consists in such a particular figure, odor, etc.: of a man, in an intelligent active power, joined with an animal body, of such a particular shape, and configuration of parts: of a triangle, in three sides, joining at three angles: of justice, in rendering to every one his due, etc. In short, whatsoever goes to the definition of a thing, so as to give it a clear and necessary discrimination from all other things, we call the essence of it, whether in fact it exist or not. Thus we have as clear an idea of a rose in winter, as in June, when it is before our eyes, and under our noses; and as fixed and stable a notion of a triangle, circle, justice, or charity, even upon supposition that the figures and actions which go by those names, do not exist in nature or fact, as if they did. Whereas by existence, we generally mean a thing's being actually in fact and nature, as well as in idea or conception, as a rose in June, the sun in the firmament, a man actually doing a just or kind thing, etc. Hence existence always implieth essence, tho' essence doth not necessarily imply existence, except in that of the necessarily existent being, in whom

necessity of existence is implied in His very essence, and accordingly His original name Jehovah, given by Himself, does literally signify, *The Essence existing*, as Mr. Hutcheson shows in *Mos. Sine Princip.* Ch. 2.

§ 10. In pursuance of this distinction between the essence and existence of things, which is necessary in order the Of Principles. better to conceive of them, it is here also needful to explain what we mean by the word *Principle*, which originally signifies the beginning of a thing, or that from whence any thing takes its beginning, origin, or derivation; and in this sense it is nearly allied to the word, cause. Thus God may be said to be the principle or origin of all things. And as the essential constituents whereof any thing consists, have been ranked among the causes, they are also called the principles of which it consists, and into which it may, at least in conception, be resolved; as man of soul and body, bodies of the four elements, a triangle of its three sides and angles, etc. And as the properties and powers of things have been supposed to flow from their essence; hence that in any thing which is supposed to be the foundation or original from whence its properties, powers or actions derive, is called the principle of them; as equality with two right angles from the nature of a triangle; perception and self-exertion from the nature of the soul, etc. And lastly, as the knowledge of things consists in understanding the foundation of their existence, the causes from whence they are derived, the essentials whereof they consist, and the origin of their properties and powers; hence the propositions, expressive of this knowledge, are called the principles of any science.

§ 11. To this head of causes and effects, belongs the distinction of things possible and impossible. We say a Of Things possible thing is possible, when there is a power sufficient to produce it, and impossible, when there and impossible. is no power adequate to the production of it. Of which some things are impossible in their own nature, as implying a contradiction in themselves, as that there should be a mountain without declivity, or a triangle consisting only of two sides, which are impossible to God himself, not for want of power in Him, but because they imply a repugnancy in themselves, or a contradiction to some necessary and eternal truth, which God himself cannot alter. And of things possible in their own nature; some are

possible to an unlimited power, which yet are impossible to a power that is limited. A man can build a house, tho' he cannot create a world. And of limited powers there is an endless variety, so that what is possible to one may be impossible to another. Here therefore the maxim is, that what is fact is possible, but, it does not therefore follow, that if it be possible it is fact.

§ 12. Under this head of causes and effects, it is necessary more particularly to explain the distinction of Of Things necessary beings into things necessary and contingent. and contingent. By things contingent, we mean, such as depend on the free exertion of the wills and powers of intelligent active beings, and which therefore might not have been, had they so pleased, and consequently their existence is precarious and dependent. Thus, that I sit here, and whether I shall sit here an hour longer, or not, is contingent, as depending on the freedom of my own will to do so, or not, as I please. Whether the sun will rise to-morrow, is contingent, as depending on the free exertion of the will of the Deity, who may, if he pleaseth, this moment put an end to the whole course of nature. And thus the existence of the whole creation is contingent, and precarious, as deriving from, and dependent on, the mere will and power of God, who if He pleased, might not have commanded things into being, and may cease to will their continuance when He pleaseth. Whereas by things necessary, we mean such as can't but be, which must be understood either with regard to our power, or that of the Deity. Thus, with regard to our power, it can't but be that things are as they are, and as He hath made them, and that the course of nature proceeds as it does, and as He hath ordered it, which therefore, tho' not so in itself, to us is necessary and fate. But that only is absolutely necessary in itself, the non-existence of which would imply an absurdity and contradiction; and nothing else is thus absolutely necessary besides the Deity Himself, the necessarily existent Being, without whom nothing could ever have existed; and eternal truths which are founded in the perfection of his nature, independent of any other mind whatsoever; as, that the whole is bigger than either of its parts: that all the rays of every circle are equal: that we ought to do as we would be done by. These, and the like, being absolutely and unalterably necessary, antecedent to the will, and independent of the free exertion of the power of the Deity, as well

as His own existence and perfections, must unavoidably be emanations of that necessarily existent Being.

§ 13. To this head also belongs the distinction of beings into finite and infinite. That is said to be finite, which hath Of Things finite certain limits or bounds to its existence or powers, and infinite. as are all determinate lines, and the surfaces and figures of bodies, or the powers of created minds; in short, all kinds of effects or productions, which are limited to such a degree or measure of being, as their cause is pleased to bestow. For the will and power of the cause that gives them being, limits them to such a measure of being, extent and power, as he thinks fit to impart; which, in many instances, may be said to be indefinite, as extending vastly beyond our comprehension. But that Being only is infinite which comprehends all that truly is, without any bounds or limits, and whose knowledge and power extends to all that is, or is possible. Hence,* tho' the word infinite, in grammatical construction is a negative term, used in accommodation to our weak capacities, yet what it expresseth is truly positive, as implying all that absolutely is; and the word finite, is truly the negative, as implying but a limited part of that which truly is; the infinite being the absolute independent being, or being by way of eminency, and without the power of any other being to limit or control it; and the finite, entirely dependent on the will and power of another to be and continue what it is, and so exists only conditionally.

§ 14. And lastly: to this head of causes and effects doth also belong the distinction of things perfect and Of Things perfect imperfect. An effect is said to be perfect, when and imperfect. it is finished according to the plan or design of it, and fitted to answer the end proposed, from whence we arise to the general notion of perfection. And we say, a being or thing is perfect, when it hath all the parts, properties or powers, that a thing of that nature ought to have in order to constitute it in that kind of being, and to render it capable of answering the end of its being: as a man is said to be perfect, that has all the parts and powers that a man, as such, ought to have, so as to answer the general end of his being; *i. e.*, some good degree of happiness: he is then said to be perfect in his kind, tho' some of the

* *Vide* Cambray on this subject, in his demonstration.

same kind may have their properties and powers in a greater degree of perfection than others, and so be perfecter in degree, tho' not in kind, and consequently capable of answering some nobler ends, with regard both to themselves and others, as enjoying or communicating certain higher degrees of happiness. On the other hand, we say a thing is imperfect, when it is destitute of certain parts or properties that a thing of that kind ought to have; as a man with but one hand, or one eye, or an idiot, etc., who consequently cannot so well be useful to others, or enjoy himself. But if any creature hath all the parts and properties that a creature of that kind ought to have, tho' it is said to be perfect in its kind, yet it is said to be but comparatively perfect with respect to other kinds of beings of greater perfection and excellency, as being made for higher ends; *i. e.*, to enjoy or communicate greater degrees of happiness; but what degrees of being or perfection any thing has, it receives from the free will and pleasure of its cause. And that being only is said to be absolutely perfect, who hath an entire absolute fulness of being, perfection and excellency, and consequently enjoys the highest happiness, having in and of Himself all being, all that truly is, and therefore an all-sufficiency, even every thing that can contribute to render both Himself and all his creatures completely happy.

§ 15. To this head of perfection therefore belong the notions of truth and good. A thing is said to be true with respect Of Truth to the original archetype, plan or design of it, or so and Good. much of being or perfection as it was designed to partake of, and good with respect to the end of it, which it was designed to answer: so that its truth consisteth in its conformity to its plan or archetype, which is its standard; and its goodness is its fitness to answer its end. And as the plan is formed with a view at the end to be answered, they are in effect only the same thing under diverse considerations; and a thing is true, considered as intelligible, and good as eligible. Thus a house is said to be true, as it answers its archetype or model, as conceived or understood in the mind of the architect; and good, as it is fitted to answer the end he designed in it, *viz.*, the convenience and pleasure of its inhabitant, on account of which it is delightful or eligible. So the truth of each creature, and of the whole world, consists in its conformity to its original design, archetype or standard, conceived in the infinite mind of the great divine architect, and as such, intel-

ligible to Him, and in some measure to any other mind; and its goodness consists in its fitness to answer His ends in giving it being, and particularly the happiness of His rational creatures, on account of which, it is pleasing and eligible to Him, or any other intelligent being, that feels or discerns that fitness. Hence goodness being in effect the same with perfection, must have the same distinctions of kind and degree, comparative and absolute as above. And the infinite mind of the Deity is the standard of all things that exist, He is the truth itself absolutely and by way of eminence, comprehending in Himself all that is and can be; all reality and perfection, considered as intelligible and variously imitable in and by his creatures: and as He is the pattern and author of all fitness and proportion to any end, and the fountain of all that is pleasant and beautifying, or the original of all that is good in the whole creation, He is goodness itself, and therefore infinitely eligible, and to be chosen and loved above all things. Thus we are led from the type to the archetype; from all the emanations of truth and good in the creature, variously portioned out as pleased Him, to that being who is the great principle and original of all; the truth itself, even all truth, and good itself, the chief good, the $\text{TO}' \text{'ΑΓΑΘΟ}'\text{N}$, infinite truth, and infinite good, all that can beautify both intellect, will and affection.

§ 16. To this head of perfection or excellency we may also refer the consideration of beauty and harmony, which Of Beauty and Harmony. have a manifest relation to some end which any thing is designed for. By beauty, we vulgarly mean, such an assemblage of visible ideas as pleases and charms the eye; and by harmony, such an assemblage of sounds as pleases and charms the ear. But, more strictly speaking, it is the mind or intellect that is charmed on these occasions, by means of the objects of sight and hearing. What is it then that is beauty and harmony to the interior intellectual sense of the mind? And if it be duly considered, it will be always found that it is fitness and proportion, either real or apparent, in relation to some end or use, in those objects that please and charm us. Thus in beauty, an assemblage of various ideas, all fitted and proportioned to each other, and, in the whole, to one uniform design and end, subservient to the advantage and pleasure of an intelligent mind, or of a social system of intelligent beings; this is what pleases and charms under the notion of beauty, as might be exem-

plified in the beauty of a person, an animal, or a building, etc. And from sensible things it is figuratively and by analogy transferred to affections, actions and behaviour; the beauty whereof consisteth in their uniform fitness and tendency to the order, peace and happiness of each individual mind, and, in the whole, of any social system. So as to harmony, it is an assemblage of various sounds, all fitted and proportioned to each other, and in the whole composition, to an uniform design and end, expressive of what may please and delight the mind. And from music it is transferred to signify things fitted and proportioned to each other, and to the whole system, and thence pleasing and delightful, whether in the natural or moral world. Hence we speak of the harmony and order of all nature, and of the harmony and order of society. So that both in beauty and harmony, the fitness and proportion of things, affections and actions to each other, and in the whole, to the pleasure, peace and happiness of intelligent beings, is always understood. And from thence we arise to the apprehension of the first original beauty, the ΤΟ ΚΑΛΟΝ, the pattern and source of all fitness and proportion in the absolute perfection of the divine intellect and conduct, and the harmony of the divine attributes and operations, and all the happiness, both divine, human and angelical, resulting therefrom.

§ 17. Next to the consideration of a being or thing as existing from its causes, we consider it as a substance with regard to its accidents, and a subject with respect to its adjuncts. The primary notion we have of substance is taken from body, as being something that is hard or solid, and resists the touch, as gold, wood, &c. and observing a number of other ideas or sensible qualities always attending it, or connected with it, we call them its accidents, as long, broad, thick, square, round, red, blue, yellow, &c. Of these, we observe some essential to all bodies, as length, breadth, thickness; others we observe to be various in different bodies, as square, round, white, black, &c. Those qualities that are essential to any thing, we call properties; and the others are more properly called accidents, modes or modifications. Now that solid, extended, figured thing, which resists the touch, being the first idea or combination of ideas, to which we give the name substance, we are apt to consider that as the foundation or substratum to the rest, and the other qualities as

subsisting in it, or depending on it, tho', strictly speaking, they are rather only co-existent and connected with it by the law of nature, which is the mere *fiat* of the Almighty. This is our original and proper notion of substance in bodies, and from thence we analogically apply it to minds or spirits, tho' they are beings of an entirely different kind, and have nothing common to them but mere being or existence, so that great care must be taken that we do not imagine any thing like a solid substratum in spirits as such. But if we must apply the word substance indifferently to both, it may be defined to mean any distinct being considered as consisting of its essential properties. Thus a body we call a substance, as consisting of solid length, breadth and thickness, or solid extension, which are its essential properties, without which it cannot be conceived as being what it is. So we call a spirit or mind, a substance, as being a power or principle of conscious perception and activity, which are properties essential to it as being what it is. Thus we may say, a tree, a horse, a man, an angel, &c. (and by analogy, even the Deity Himself) are substances. And those qualities that are not essential to it, may, as I said, be called its modes or accidents; as in a man, to be tall or short, white or black, fat or lean, learned or ignorant, virtuous or vicious, &c. which have also, sometimes, been called adjuncts: but this term is more properly applied to external appendages or circumstances, as clothes, riches, &c. with respect to which the being is called a subject; and any of them, whether properties, modes or adjuncts, in speaking of it, are called attributes; and a succinct lively enumeration of any or all of these, in any subject, discriminating it from any other thing, is called a description of it.

§ 18. Every body or sensible thing that is, must necessarily have some time and place, in which it exists, which Of Time and Place, are reckoned among its principal modes; and Space and Duration. by its time, is usually meant, that portion of duration; and by its place is meant, that portion of space, in which it exists. But then by space, we must mean the whole extent of sensible things, the place of each particular thing, being that part of the whole extent which it occupies, in its proper situation relative to the rest. And by duration, must be meant, the whole continuance of the existence of the entire sensible world, measured out by the revolutions of the sun; and the time of any particular sensible thing, means, its continuing to exist during

so many parts, or such a number of his revolutions. But time considered as a conception in the mind, is nothing else but the succession of its ideas, of which the succession of some principal ones, as the revolution of years, days, &c., being settled and stable according to the established course of nature, are considered as standards or measures to the rest. Such are time and place, space and duration, literally with regard to the sensible world, to which they properly belong, and they are only figuratively, and by analogy, ascribed to spirits or intelligent active beings, concerning which the term *ubi*, where, and when, by some have been preferred. For, as their existence is entirely of another kind from that of bodies, so must their space and duration be. As their existence consists in conscious, active intelligence, so their space must mean only the extent or reach of their intelligent active powers, and their duration only their continuance to exert those powers. But, strictly speaking, they are so far from existing in space and time, that, on the other hand, space and time do truly exist in them. And accordingly the infinite eternal mind is so far from existing in infinite space and duration, that He comprehendeth all space and duration, and every thing that is, within His boundless intellect, and is present to all times and places, not after the manner of being co-extended with them, but as an infinitely active, all-comprehending intellect, to whom all things, all times and places, are at once present, without succession or limitation; *i. e.*, they are at once known to His infinite mind, and subjected to, and dependent upon, His unlimited will and power.

§ 19. Next to the consideration of a being or thing, as a substance with regard to its accidents, and a subject with regard to its adjuncts, we consider it as a whole with Of Whole and Parts. regard to the parts whereof it consists: as a man consists of soul and body; and his body, of his head, trunk and limbs, each of which may be yet further subdivided. On the other hand, we call that a part, which is considered as being not an entire thing of itself, but as it goes, in conjunction with other parts, to the constitution of a whole or entire being, as a leg or an arm, with respect to the human body: such is any individual thing with respect to the parts whereof it consists, which therefore may be called an individual whole, as not being divisible into more of the same kind, or quantity, and the parts of which are not of themselves entire beings. But besides this, there is, what is called an aggregate

whole, the parts of which, are each a distinct entire being, tho' it has a relation to other distinct beings, with which it is connected as parts of another whole; and the parts are either of the same, or of different kinds. Such, of the first sort, is an army, consisting of the many distinct individual men whereof it is constituted, each of which, is an entire being of himself, and all of the same kind. And such, of the other sort, is the whole world with regard to all the various distinct beings whereof it consists, but those of different kinds, as bodies, spirits, men, beasts, trees, stones, &c. So that the same thing may be a whole with regard to the parts whereof it consists, and a part, as it goes to the constitution of another whole. And the maxim here is, that the whole is greater than either of its parts, and equal to them all taken together, which is the foundation of all mathematical demonstrations. This notion of whole and parts, is originally taken from bodies, and is properly and literally to be understood of them and their dimensions, but may analogically and improperly be applied also to spirits; in which sense we may say, the soul is a whole, and the understanding, will, affections and exertions of it may be considered as parts of it, they bearing the like analogy to the soul, as the members and organs do to the body.

§ 20. Under this head of whole and parts, we may consider the notions of unity and multiplicity, number and order. A whole or entire being, considered as Of Unity and Multiplicity, being simple or indivisible into more of the Number and Order same kind of quantity, we call a unit or one entire individual being, as one shilling, one tree, one ox, one man, one angel: thence it is applied also to an aggregate whole, as one army, one world. And the parts of which any whole is compounded or consists, are said to be manifold. And by how much the less of composition there is in any being, by so much the perfecter it is, as being so much the more one. Hence spirit being compounded only of power and act, is more perfect than body, which is compounded of many parts and dimensions. And as power and act in the Deity entirely coincide, He is the most perfect being, as being the most simple and entirely one, and therefore is called *pure act*, without any variety or multiplicity; a most perfect unit, consisting of all reality and perfection. Now from the multiplicity of individuals with regard to an aggregate whole,

and of parts with regard to each individual whole, we have the conception of number, the parts being numerous or consisting of a number of units, as many members in the same body, many men, many beasts, many trees, &c., to which in computation, we give the denominations of one, two, three, four, &c. And these parts we consider as subsisting in some order, according to their several relations and situations, with regard to each other, and to the whole: of which we say, one is prior, the other posterior to the other, either in nature, time, place, dignity or knowledge, as a father to his son, &c. And this order of things which we express by the terms, first, second, third, fourth, &c., we find to be founded in some establishment which we observe to be made in the course of nature, which therefore, in all our divisions and subdivisions, conceptions and reasonings, we should make our standard, and endeavour to follow it as exactly as ever we can.

§ 21. Moreover, to this head of unity and multiplicity, belong the notions of identity and diversity. A thing is said to be one and the same, when it appears to have all the essential individuating properties at one time that it had at another, tho' it may differ in some things accidental or circumstantial, as a man at 5 and at 50. But if things differ in any thing essential, we say, they are diverse, being not the same, but the one a different and distinct being from the other as an apple and an oyster. But identity is of very different consideration in bodies and in spirits, as they are beings of an entirely different kind. In bodies, we call that one and the same, which, however it may differ in some things not essential to it, yet in things peculiar to it, it affects our senses in the same manner at one time as at another, or consists of the same sensible qualities, figure, color, &c., essential to it; as a mountain now, and twenty years ago: and those are diverse or distinct bodies one from another, that consist of different sensible qualities essential to each, as gold and lead; or that in bodies is the same or different, which appears to consist of the same or different individuating sensible qualities. But as by a spirit, which is also called a person, we mean a distinct, conscious, intelligent agent, so his identity consists in being conscious of a series of perceptions and actions that he knows to be his own and not another's, by which therefore he knows he is the same person now with himself twenty or fifty years ago, which

continued consciousness is his distinct individuating property. Whereas Peter is not the same with Paul, but another person, each having distinct individuating properties, the one being conscious of a different and distinct series of perceptions and actions from the other. And another appears to me the same with himself at different times, or to be a different person, according as from his words and actions, he appears to be conscious or not conscious of the same perceptions and actions. This is the usual and common sense of the word person, which, however, is sometimes used to signify not a distinct being, but a distinct capacity: in which sense the same intelligence may sustain diverse persons, by acting in so many different characters or capacities. I need say nothing here of the sense of this word, as used *in divinis*.

§ 22. Furthermore, some things are said to agree, others to differ, and be opposite to each other: and those
 Of Things agreeing things that agree in a third thing, are said to
 or opposite. agree between themselves; and the idea or
 conception of the one, in some respect, includes or implies the idea or conception of the other, and vice versa. Thus things are said to agree in their causes, effects, properties, subjects, adjuncts, time, place, quantity, quality, etc., as two sons have one common parent, two men are contemporary, or are countrymen, or have the same occupation, etc. But things are said to disagree or differ in relation to these things, as two men of different countries or occupations, etc., and to be opposite, when they are contrary the one to the other, and the idea or notion of the one excludes that of the other, as light and darkness, heat and cold, extension and thought, true and false, right and wrong, &c., and any thing and its privation or negation, as sight and blindness, &c.

§ 23. In the next place, we say, things are equal, when they have
 the same quantity, whether discreet or continued;
 Of Things equal *i.e.*, number or magnitude, as $2+2=4$, and any
 or unequal. two right angles are equal to each other, having
 the same, or an equal number of parts or degrees.

On the contrary, we say things are unequal, when one is greater, and the other less, as 3 is more than 2, a right angle is greater than an acute, and less than an obtuse, &c. And here the mathematicians have several maxims which are the foundations of their demonstrations; as, equals added to equals, make the whole equal; and

equals taken from equals, leave the remainder equal: so of unequals, &c. And from bodies and their dimensions, this is by analogy transferred to spirits or minds, which are compared in their powers and faculties, as bodies, etc., in their quantities. Thus we say, one man or angel has an equal, greater or less degree of understanding, force or activity, than another, and those of the Deity are infinite, and beyond all comparison. To this head belong the arguments, *a majore ad minus affirmando*, and *a minore ad majus negando*; as, if one man can lift such a weight, much more two; and if two cannot lift it, much less one.

§ 24. And lastly, we say, things are like one another, when the one resembleth the other in some quality, power or faculty; and of all other analogies, those between Of Things like and unlike. the natural and moral world are the most pleasant and useful; God having designed the one as an emblem of the other, whereby we may be best instructed from our senses in what most concerns us: as knowledge is like light, or benevolence like attraction; *i. e.*, knowledge is to the mind, what light is to the eye, in the discovery of truth. In like manner, benevolence is to society what attraction is to nature, as the one preserves order and harmony in the natural world; so the other preserves peace and happiness in the moral world. This is what is called analogy or proportion; and is either continued or disjunct. Continued when the first term is to the second, as the second is to the third, as, the parent is to the child, as the child is to the grandchild. Disjunct, when the first is to the second, as the third to the fourth; as, virtue is to the soul, as health is to the body, in regard to ease and tranquility. To this head belong the mathematicians' doctrine of proportions, or the similitude of ratios, as, $2:4::4:8$; and $2:4::6:12$. Here likewise belong moral proportions, or the fitness of affections and actions to characters with regard to happiness. Hence that reciprocal proportion expressing the grand foundation principle of morals, that such affections and actions as are right or wrong in another towards me, as tending to promote my happiness or misery in the whole, must for the same reason be right or wrong in me towards him, supposing an exchange of characters. Thus of similitude. On the other hand, we say, things are unlike, when they have different qualities and powers; as John is not like Thomas, the one being a good genius, the other a dunce.

§ 25. Whatever being or thing, or whatever power, effect, property, adjunct or part, quantity or quality of any thing be the object of our consideration; in order the better to think of it by ourselves, and especially in order to converse with one another about it, it is necessary to give it a name, or annex some sound or other sign, agreed upon to be steadily significative of it, whether it be an object of the sense and imagination, or of the pure intellect and reason; and that sound or sign so established, becomes a kind of vehicle to the idea or conception, whether simple, compound or complex. Thus we give the names white, black, red, &c. to the colors so called; hard, soft, hot, &c., to the tangible qualities so called; and consciousness, perception, self-exertion, &c., to the simple conceptions so called. Thus to instance in the compounds; we give the name gold to a certain yellow metal that is the heaviest and most ductile of all others, and the name cherry to the fruit of such a tree, and of such a particular figure, consistence and taste; and so the name justice, to an action of an intelligent agent, designing to render to every one what he apprehends to be his due, etc. This is called denomination, or giving names to things. And the great rule to be observed in this affair, is, that we constantly annex such an idea or conception, or such a precise collection or combination of either sensible ideas or intellectual notions, to such a name or word, and always use it in the same sense. And the true notion of a definition, whether in things sensible or intellectual, consists in explaining what are the precise ideas or conceptions, which are combined and annexed to such a name. Thus the word gold means a yellow fusible body, of the greatest weight and ductility of any other, and soluble in *aqua regia*. So the word spirit, means a conscious, intelligent, active, self-exerting being. Thus we define compound ideas, or complex conceptions; but as for those that are simple, they cannot be defined otherwise than by some synonymous term, because they can be known only by experience.

§ 26. Any one entire being that cannot be divided into more of the same kind, we call an individual, whether it be a body, or a spirit, and in order the better to think and speak of it, we give it a proper name, as, to this man the name of John, to that, Peter; to this horse, the name Bucepha-

Of Abstraction,
and of Individuals,
Sorts and Kinds.

lus, to that dog, the name Argus, &c. And if there be no occasion for a proper name, we say this tree, that stone, that piece of gold, &c. And observing that there are a great number of individuals that agree in certain essential properties that discriminate them from all other things, we call all the beings of that sort, a species, and agree upon a common name that shall indifferently stand for every individual of that sort: this is what is meant by abstraction. Thus observing all the individuals of men to agree in a certain figure, shape and structure, and in certain powers of reason, speech and activity, we call the whole species by the general name, man, in which we do, in effect, substitute some individual idea to represent the whole species, and annex to it a general name common to all the individuals. And comparing this set of beings, which we call mankind, with another set which we call beasts, we find there are some properties in which they all agree, as life, sense and spontaneous motion, etc., to these we give a more general name or genus, that shall stand for them all, as the word animal. And ascending higher, we observe that each tribe of animals agree with another set of beings called plants, in vegetable life, and so constitute a yet more general name to stand for them all, as the word animate. And finding all of these agree still with a vastly greater number of other things, elements, stones, metals, &c. in the three dimensions, length, breadth and thickness, we agree on the yet more general name body to comprehend them all. And lastly, spirits are yet another set of beings, entirely and *toto cælo* different from bodies of any sort, whose essence consists in conscious perception and activity, and have nothing common with them but bare existence; so that we comprehend them all, both bodies and spirits, both things perceiving, and things perceived, things active, and things passive, under the most general name, being, or thing; *i. e.*, what is, or exists. This is the highest genus of all, which, with the subordinate genera or kinds, have been considered as another kind of whole, called *Totum Genericum* (to distinguish it from the other whole, explained above, (§ 19.) which is properly so called, but for distinction-sake is also termed *Totum Integrale*) and its parts are called *Species* (the parts of the other being called its members.) And the division of the *Genus* into its species may more fitly be called distribution, and that of the *Integrum* into its members, partition. Thus in the instance before us, we distribute beings into bodies and spirits; bodies into inani-

mate and animate; animate into plants and animals; and animals into men and beasts. And lastly, these lowest species can be distributed only into the several individuals. But the individuals, tho' they cannot be distributed into sorts, they may be distinguished by their causes, effects, subjects or adjuncts, &c., as, by their families, places, or countries, by their colors, sects or occupations, and other accidental circumstances.

§ 27. It is of great importance, in order to think clearly and justly, to take care that we have as exact a notion as possible of all those properties in every kind of being, that do essentially distinguish one from another, that we may make our definitions and divisions just, and avoid as far as possible, that perplexity of thought and expression which ariseth from confounding one thing with another. But this is more especially necessary in that first great division of beings into bodies and spirits; because we take our first rise to knowledge from sensible things or bodies, and by that means are so prepossessed with a notion of their reality and importance, that it is with much difficulty that we rise to the notion of spirits and what relates to them; or, when we do, to have any strong apprehension of their reality and importance, or to conceive of them but under corporeal images. We should therefore labor much in the business of reflection, and abstraction from sensible to intellectual things, and disengage ourselves from sense and imagination as much as possible; and consider, that tho' our notion of spirits is entirely of a different nature and original, from that of bodies, it is neither less real and substantial, nor indeed less clear and certain. These we have from sense and imagination, and those from consciousness and reasoning; but as these are faculties of as much reality and certainty, as those (nay more) we are not less certain of the existence of spirits than of bodies, nor have we a less clear notion of the one than the other. I am as intuitively certain of my own existence by consciousness, as of the existence of bodies by sense, and am as demonstratively sure of the existence of other spirits, and especially of the eternal Parent Mind, as I am of any thing imaginable whatsoever. Nay (as I said) upon due consideration, it will appear that the evidence and reality here hath much the advantage. And I do as clearly and perfectly know what I mean, when I say, I or myself, as when I say, my body; and have as clear a

notion of the meaning or conceptions annexed to the words, sense, imagination, consciousness, understanding, reason, pleasure, aversion, activity, self-exertion, &c., as of the meaning or ideas annexed to the words, extension, figure, solidity, motion, color, sound, heat, cold, sweet, bitter, &c. I as perfectly know the one as the other. So that I must consider spirits, as being as much real and intelligible beings as bodies, tho' of entirely a different kind; and indeed as much more real, as they are a more perfect kind of beings; as perception and action are things of greater reality and perfection than being perceived and acted; activity than passivity: and they must be of as much more importance, as one's self and the enjoyment of one's self is of more importance to us, than any outward sensible objects.

§ 28. Indeed there is a difficulty in being duly disengaged from things sensible, in order the better to conceive Of Signs, Meta- of things intelligible, spiritual and divine, and phor and Analogy. we are obliged to make use of those as a means and step to these, using sensible signs, metaphors and analogies, to represent and shadow forth those more noble, abstract objects of intellect, reason and faith. For (to use the words of the great author of the Minute Philosopher, Dial VII. § 16.) "As the mind is better acquainted with some sort of objects which are earlier suggested to it, strike it more sensibly, or are more easily comprehended than others, it is naturally led to substitute these objects for such as are more subtle, fleeting or difficult to conceive. Nothing, I say, is more natural than to make the things we know, a step to those we do not know; and to represent and explain things less familiar, by others that are more so. Now it is certain we imagine before we reflect, and we perceive by sense before we imagine, and of all our senses, the sight is the most clear, distinct, various, agreeable and comprehensive. Hence it is natural to assist the intellect by imagination, the imagination by sense, and the other senses by sight. Hence figures, metaphors and types. We illustrate spiritual things by corporeal; we substitute sounds for thoughts, and written letters for sounds; emblems, symbols and hieroglyphics, for things too obscure to strike, and too various or too fleeting to be retained. We substitute things imaginable for things intelligible; sensible things for imaginable; smaller things for those too great to comprehend easily, and greater things

for such as are too small to be discerned distinctly; present things for absent; permanent for perishing; and visible for invisible. Hence the use of diagrams: hence right lines are substituted for time, velocity and other things of very different natures. Hence we speak of spirits in a figurative style, expressing the operations of the mind by allusions and terms borrowed from sensible things, such as, apprehend, conceive, reflect, discourse, and the like. And hence those allegories which illustrate things intellectual by visions exhibited to the fancy." Hence also it is that we conceive and speak of God Almighty by analogy from the greatest perfections in ourselves, such as knowledge, wisdom, power, justice, goodness, &c., which we substitute to represent his infinite perfections, removing all limitations and imperfections. And hence it is that in the Revelation which God hath made of Himself, and His dispensations towards mankind, he clothes Himself with human parts and passions, in order to render Himself in some measure intelligible to us, and moreover, teacheth us, what (to all practical purposes, which are chiefly aimed at) it concerneth us to know of him and his dealings with us, by things and relations familiar among our selves, such as, the sun, light and life, father, son and spirit, mediator, redeemer, priest, propitiation, king, kingdom, &c. All which gracious accommodations to our low capacities, we must always so understand and explain as to imply nothing contradictory or unworthy of his infinite excellency, implied in either his natural or moral perfections.* Thus much of the mind's simple apprehension of its objects, and their relations, arising from our comparing them one with another, and the manner of our conceiving and expressing them.

CHAP. III

Of the Mind judging, affirming, denying, assenting, &c.

§ 1. I proceed now in the second place to the consideration of that act of the mind, which is called judgment, Of Judgments *i.e.*, which affirms or denies one thing of another, and judges of true and false. Accordingly I observe further: that no sooner hath the mind compared its ideas or conceptions one with another, but, perceiving, or apprehending that it perceives their connections and repugnances, or the agreement or disagreement between them, it

* On this Subject read Bp. Brown's *Proceedure*, etc., of the understanding.

passeth some judgment affirming or denying the one of the other, according as it apprehends the one is or is not included or implied in the other or connected with it. Thus observing the ideas we call roundness or brightness agree with, or are included in the idea to which we give the name sun, we affirm the sun is round or bright. And finding the idea we call a square is not comprehended in that of the sun, we deny that the sun is square. So with regard to intellectual notions; we affirm virtue is preferable to gold, and deny that riches are of so much worth as learning; where excellency beyond that of gold is included in the notion of virtue, and an excellency equal to that of learning is not included in that of riches. These judgments of the mind expressed in words, we call propositions. And the idea or conception of which we affirm or deny any thing, is called the subject of the proposition; and that which is affirmed or denied of it, is called the attribute or predicate, and what joins them is the verb; and what separates them is the negative particle; as, the sun is the center, or, is not the center of the world.

§ 2. In all propositions the subject is either a general or an individual idea or conception. If the subject be a general term, then it is either a universal or particular proposition. It is a universal proposition when the attribute or predicate is understood to be affirmed or denied of all the individuals contained under the subject; as, man is a rational creature, man is not immortal; and is generally expressed by some term of universality, all or none. All is a universal affirmative, as, all men are mortal; and it is denied by denying the term of universality; as, not all men are mortal; or by a particular negative, as, some men are not mortal. None is a universal negative, as, no vice is to be indulged; which is denied by a particular affirmative, as some vice is to be indulged. On the other hand, a proposition is particular, when the predicate is understood to be affirmed or denied of only some of the individuals contained under the subject; as, some men are wise, some men are not rich. And a particular affirmative is denied by a universal negative; as, no men are wise; and a particular negative is denied by a universal affirmative; as, all men are rich. But if the subject be an individual, the proposition is called singular, as John is wise, or is not rich, which are denied, the one, by saying, he is not wise; the other by affirming he is rich.

§ 3. Another division of propositions is into such as are simple and such as are compound. If a proposition expresses but one judgment of the mind, and cannot be properly resolved into more propositions, or the full sense of it may be expressed in one proposition in which there is but one attribute predicated on but one subject, it is called a simple proposition; as, God is good. And these are either absolute, when the predicate is expressive of something essential to the subject, or directly predicated of it, and no condition is either expressed or understood, as, the sun is bright; or conditional, when there is some condition annexed to the subject, upon the supposition of which, the predicate is affirmed or denied of it; as, if God be good, he cannot delight in the misery of his creatures. These conditional propositions have, by some, been reckoned among the compounds; but ought not, by the definition above given, tho' they have that appearance; they being reducible to one proposition, as in this example; it is only as much as to say, God being good cannot delight in misery. On the contrary, a compound proposition is expressive of several judgments of the mind, and may be resolved into two or more propositions, there being two or more subjects, or two or more predicates, connected by conjunctions; as, the sun is bright and round; both wisdom and riches are desirable. And these compound propositions are either copulatives or disjunctives, according as the parts are connected by copulative or disjunctive conjunctions; as, both Peter and Paul were apostles and martyrs. The world exists either of itself, or from a most wise and powerful cause.

§ 4. But the most important distinction of propositions is, into such as are true or false. If we join or separate, *i. e.*, affirm or deny things as being what they really are, the proposition is true; as, gold is heavier than silver, or silver is not so ductile as gold. But if we affirm or deny things otherwise than they really are, the proposition is false; as, money is better than virtue, or learning is not so good as riches. And here it may be remarked, that the proper original notion of truth (as was above observed, Chap. II. § 15.) is, that it consists in the agreement of any thing with its standard. God's infinite intellect, comprehending all that is, is the original standard. He himself is said to be infinite truth, or the truth itself, as being infinitely intelligible and perfectly known

to his own infinite intellect, and conformable to it in all that he is and does; and all things that exist, are what they are originally in his eternal archetypal idea, or as they are known to him, whether they be things necessary or contingent. And the truth of things created consists in their conformity to their archetype, as they actually exist in nature and fact, partaking of so much truth and reality as the great Author of them thought fit to assign them. This is, what is called, metaphysical truth, as above explained. And now, this existence of things as they really are, whether in the eternal mind, if they are things necessary, or in the nature and fact, if they are things contingent, must be the standard to our minds, and our knowledge or judgment of them is then truth, when we conceive and affirm of them as being what they really are. This is called logical or mental truth. And, lastly, our thoughts and judgments of things must be the standard to our words and expressions concerning them; which are then truth, when they agree with the real sense and apprehension of our minds. This is called verbal truth; and when we design nothing but to speak as we think, it is called moral truth. Since therefore truth is inflexible, and things are what they are whatever we think of them, and no imagination or opinion of ours can, in the least, alter them; it concerns us above all things to think and speak of them, as well as to affect and act with regard to them, exactly as being what they really are.

§ 5. As all things are in their own nature either necessary or contingent (as was shown above, Chap. II. § 11.) Of Propositions so are the propositions expressive of them. Here necessary and therefore it is needful to explain this distinction contingent. of propositions. Accordingly, those propositions we call necessary, which assert things or relations which are in their own nature necessary, immutable and eternal, and which (as was above explained) being founded in the infinite perfection of the divine nature, are independent on the divine will, and therefore cannot be altered by the power of God himself, because it would involve some absurdity or contradiction; as, some being must have always existed; no being can begin to be without a cause; triangles of the same base and height are equal; benefits deserve gratitude, &c. And those necessary propositions, whose evidence is intuitive, are called axioms or maxims. These truths, with all their necessary consequences, are, as it were, so many rays of that divine intellectual light above asserted (Chap. I. § 13.

14. and Chap. II. § 3.) which incessantly flow from the great Fountain of Light, and shine alike into all created minds. Of this kind are a multitude of metaphysical, mathematical and moral truths, which, it is evident, must be of a divine original, since, like the Deity, they are everywhere present to all minds, immutable and eternal, and cannot derive from any created light, or the actual existence of the creatures, which is evidently precarious and contingent, tho' they are subservient to lead us up to those truths that are necessary and eternal. On the other hand, those propositions are contingent, which assert things and relations that are contingent, as depending on the wills and powers of free agents, and consequently might not have been had they so pleaded, and the non-existence of them implies no absurdity, as, the sun shines; John runs. And of this kind are all physical truths which relate to created natures, and which depend on the free arbitrary will of the Deity, and matters of mere institution; and all political and historical truths, which depend on the free exertion of human wills.

§ 6. Now the truth or falshood of some propositions is self evident, which we are said to know by intuition; Of Propositions either by sense, as when I actually perceive light, self-evident and colors, &c., or by consciousness and pure intellect; demonstrable. as, when I say, I know that I am, and that nothing can produce itself, and that the whole is equal to all its parts, &c. The reason of this intuitive evidence is, that the attribute appears at first sight to be included in the subject, or connected with it. But if the connection between the subject and attribute doth not appear at first sight, the terms being duly explained, we must make use of a third idea or notion called a reason or argument, which may serve as a common measure or standard whereby to judge of the connection between them; which, if it evidently appears to agree with each of the terms of the proposition, it demonstrates their agreement between themselves, and if with but one of them, it demonstrates their disagreement; as, since I know I began to be, and nothing can begin to be without a cause, this demonstratively proves that I must have had a cause of my existence. And as knowledge implies a clear perception of the agreement or disagreement between the subject and predicate we are said in both these cases to have knowledge, certainty and evidence: in the former, to have intuitive certainty, or knowledge by intuition; and in the latter to have demonstrative certainty, or knowledge by

demonstration; and the certainty of demonstration is always ultimately resolved into the certainty of intuition. And in all cases, the criterion or test of evidence and certainty, is, that it is not in our power to withhold our assent or acquiescence. This is called science, which term is however, by some, restrained to those truths which are necessary and immutable.

§ 7. On the other hand, we find it, many times, in our power, and even that, in some cases, we are obliged to withhold our assent for want of perfect evidence, Of Propositions doubtful and probable. or a high probability, there being some good reasons to doubt. Now if the reasons against the truth of any proposition rather preponderate when duly compared with the reasons for it, it is called doubtful. On the contrary, if the reasons for it manifestly appear to prevail over those against it, it is said to be probable. Thus we say, it is doubtful, whether the comets are inhabited, because they seem to be in an irregular chaotic state: but it is probable that the planets are inhabited, because they appear to be vast globes in a settled regular condition, analogous to our Earth, and no other good end can be assigned them. Yet it is only probable, because we do not know enough of them to be perfectly sure that no other good end can be answered by them, and it is possible to be otherwise. And of these doubts and probabilities there are endlessly various degrees, according to the various numbers and weight of the reasons for or against them; and they also variously appear more or less probable or doubtful to different persons, according as they have more or less capacity or opportunity to examine them, and according as they give their attention more or less to the consideration of them. And when any proposition is supported with all the reasons it is, in the nature of it, capable of, and there remains no sufficient reason to doubt of the truth of it, we are then said to have a moral certainty, and our assent to it is called a persuasion, which implies a settled acquiescence of the mind in the truth of it.

§ 8. If the reasons for the probability or moral certainty of any proposition are taken from the nature of the things considered in themselves, our assent to it is called opinion; as when I say, I am of opinion Of Opinion and Faith and Rules of Assent. that the planets are inhabited, from the reasons that are taken from the nature of them, so far as we can come to the knowledge of it; which term also is, by some,

used to signify our assent to all contingent propositions, however so certain. But if the reasons of our assent are taken only or chiefly from the testimony of others (as suppose we were told by credible persons that came from the planets, that they are inhabited) it is called faith, which will be stronger or weaker according to the credibility of the thing in itself, and the number and credibility of the persons attesting it; who, if they be men, one or more, it is called human faith; such as that whereby I believe there is such a place as Constantinople, and that there were such men as Alexander and Julius Caesar, &c. And when any fact of our times is asserted by the concurrent testimony of all men, or any ancient fact is attested by the universal suffrage of all antiquity, uninterruptedly handed down to us from age to age, we have the highest moral certainty, which scarce leaves room for possible doubt. But if any proposition be attested by God himself, our assent, or acquiescence in the truth of it, is called divine faith, such as that whereby I believe there will be a resurrection, and a future judgment, &c. And this faith must entirely exclude all doubt, if we are morally sure that the proposition comes from God, and that we rightly understand it, because we are demonstratively certain, that he can neither deceive nor be deceived, so that faith is at the bottom grounded upon reason. And in all cases, if the subject be not capable of clear evidence, we must be content with such proof as the nature of it will admit of; having also a due regard to the importance of it; and always be determined by the greatest probability; and if that cannot be had, and we are obliged to act, we must be determined by the greatest safety and advantage.

CHAP. IV

Of the Mind reasoning and methodizing its Thoughts.

§ 1. Now, thirdly, that act of the mind which seeks reasons or arguments to prove the truth or falsehood of any proposition, and makes use of them to that purpose is called reason. In order to the right exercise of which, it is necessary, first, that we carefully consider the words of the proposition to be proved or inquired into, which is now called the question, and all the words and terms we make use of in our argumentations upon it; and mark well what ideas or conceptions we annex to them, and always use the same word in

the same sense, that we may industriously avoid all ambiguity. And, secondly, that we consider exactly the ideas or notions themselves signified by them, as much as possible, divested of the words, and recount and consider the parts and properties whereof they consist, that we may see how far our intuitive knowledge goes, *i. e.*, what attributes do, at first sight, appear to be included in the subject, or related to it, and what kind of relation they bear; that, by this means, carefully sifting and canvassing the matter, and separating what is clear from what is doubtful, we may first be sure where the doubt lies, and wherein the merits of the cause do really consist.

§ 2. These things being first duly observed, the right exercise of reason properly consists, first, in taking a careful survey of all the relations which the subject or predicate of the question, or disputed proposition, bear to any other ideas or notions, and thereby searching out and discovering some third idea or conception related to one or other, or both of them, which is called the reason or argument, and, as I said, may be considered as a common measure by which to judge of the relation between them; the foundation of which is that grand maxim above mentioned (Chap. II. § 22.) that those things which agree or differ in a third, must agree or differ between themselves; this called sagacity. To which purpose it is necessary that we endeavor to consider the whole of things, and as far as we can, make ourselves masters of our subject; and in many cases it may be of good use to have recourse to the several topics above explained in the second chapter, causes, effects, etc. And as all our reasoning takes its rise from self-evident propositions, we must see to it, that the connection between them and those we would prove, be made as clear and evident as possible before we proceed to a conclusion. And, secondly, when we have found an argument, and duly considered its relation to the terms of the question, the act of reason consists in inferring, from the agreement or disagreement of the subject and attribute of the question with this intermediate idea or conception, their agreement or repugnancy between themselves: this is called illation. Thus, suppose the question were, whether virtue be more valuable than riches? I first consider the nature of virtue and riches in all their properties and relations; I compare them with each other, and particularly

with regard to our happiness, which alone can render any thing more or less valuable to us; and then, from that general self-evident proposition, that, what most contributes to our happiness is most valuable, I infer, that, since virtue conduceth vastly more to our happiness than riches, it must upon that account, be vastly more valuable.

§ 3. The method of reasoning in the Schools is called syllogism, which consists in comparing the intermediate idea Of the Nature or argument, first, with the predicate of the question of Syllogism. tion, which is called the major term, as being generally the most extensive; for which reason the first proposition is called the major; secondly, with the subject of it, which is called the minor term, and therefore this second proposition is called the minor, and these two are called the premises: and then, thirdly, in making the conclusion according as it is found to agree or disagree with both, or either of them. If it is found to agree with both, it is affirmative; if with but one, it is negative. As, suppose the question were, whether justice ought always to be practiced? The argument shall be the advantageousness of it. Then the major proposition will be, what is advantageous in the whole is always to be practiced: the minor, that justice is ever advantageous in the whole: then the conclusion will be, that justice is always to be practiced. Or, what is mischievous to society ought not to be practiced; lying is mischievous to society; therefore lying ought not to be practiced. The ground of which method of reasoning is this maxim: that whatever can truly be universally affirmed or denied of any subject, may truly be affirmed or denied of all or any of the particulars or individuals comprehended under that subject. And if either of the premises be yet doubtful, being denied, it must be proved after the same manner as before, till we arrive at two premises, neither of which can reasonably admit of any doubt.

§ 4. Syllogisms of this kind are called the categoric forms, as being expressed absolutely, and always consist of only simple propositions. In which Of the three figures of Categoric Syllogisms. the most usual and useful are those, wherein the intermediate idea or argument precedes, as being the subject in the major proposition, which is always universal; and follows, being the predicate in the minor, which is always affirmative: and this is called the first figure: as, an infin-

itely wise and good Being cannot delight in the misery of his creatures: God is an infinitely wise and good Being; therefore, God cannot delight in the misery of his creatures. But in some cases it may be most convenient to make the middle term the predicate of both the premises, one of which is always negative, and the major universal; this is called the second figure, as all virtue is amiable; avarice is not amiable; therefore, avarice is not a virtue. And lastly, sometimes it may be most convenient to make the middle term the subject of both the premises; which is called the third figure; in which the minor must be affirmative, and the conclusion is always particular; as, Solomon did not always act wisely: but Solomon was a wise man; therefore, some wise man doth not always act wisely, or, which is the same, all wise men do not always act wisely. Much is here said by logicians of the Modes of Syllogisms under each of these figures, which is rather matter of curiosity than use; but if any one desires to gratify his curiosity, he may see a most complete and accurate account of them in the Port-Royal *Art of Thinking*.

§ 5. But the same arguments may be disposed more familiarly in what is called the hypothetic form, the major Of the Hypothetic Syllogism. of which is a conditional proposition, as in the former example: If virtue is in the whole more conducive to our happiness than riches, it is more valuable: but it is in the whole more conducive to our happiness: therefore it is more valuable. So in a later instance: If lying be mischievous to society, it ought not to be practiced: but it is mischievous, &c., therefore ought not to be practiced. Here the major proposition consists of two parts, which are called the antecedent and the consequent, and the argument proceeds from the affirming or position of the antecedent to the position of the consequent. But there is another form of it which proceeds from taking away of the consequent to taking away of the antecedent, as, if I had said such a thing, I should have thought of it; but I never thought of it, therefore I never said it.

§ 6. There is likewise another form of syllogism which is called the disjunctive form, in which the parts must be Of the Disjunctive Syllogism. opposites, so that the position of the first must infer the taking away of the other, or of all the rest, if there be more than two; or the taking

away of the latter, or all the rest, if more than two, must infer the position of the former; as, every man serves either God or Mammon: Peter serves God, therefore he cannot serve Mammon: or, Judas serves Mammon, therefore cannot be a servant of God. And to give an instance where there are more than two, every action is either good, bad or indifferent; but to relieve a poor man is a good action; therefore it is neither bad nor indifferent; or, it is neither bad nor indifferent; therefore it is a good action.

§ 7. These are the chief forms of reasoning to which all others, that are of any consequence, may be reduced. It may Of irregular not however be amiss to say something of those which Syllogisms. are called irregular syllogisms. Of which, some are redundant, as consisting of more than three propositions, of which number only regular syllogisms consist: in which case, a reason is added to support either the major or minor, or both, before we proceed to the conclusion. Others are deficient, as when the major is left out or suppressed in the mind, being understood, tho' not expressed; as, virtue conduces more to our happiness than riches, therefore it is more excellent; such are called Enthymems. But the most noted of these irregular syllogisms are the Dilemma and the Sorites. In a Dilemma, the major proposition is a conditional, whose consequent contains all the several suppositions upon which the antecedent can take place, which being removed in the minor, it is apparent the antecedent must also be taken away; as, if God did not create the world, it must either have been self-existent, or have derived from mere chance; but it could neither be self-existent nor derive from chance; therefore it must have been created by God. Sorites is a method of arguing in a series of propositions, so connected together, that the predicate of the first becomes the subject of the second, and so on, till we come to a conclusion, in which the predicate of the last proposition appears from those intermediate propositions to be connected with the subject of the first. For an example of the Sorites, we may set down the following way of reasoning, to prove the natural immortality of the soul.

1. The soul is a conscious, intelligent, active, self-exerting being.
2. A conscious, intelligent, active, self-exerting being, as such, is entirely of an opposite and different nature and kind from that of bodies, and therefore can have nothing common with them but bare existence.

3. A being that, as such, is entirely of a different nature from bodies, and hath nothing besides existence common with them, can have no corporeal properties and affections, such as solid extension, continuity of parts, and divisibility or discernibility.

4. A being that, having no corporeal properties, and so does not consist of solid extended parts, divisible or discernible, cannot be naturally liable to a dissolution.

5. What is not, in the nature of it, liable to a dissolution, must be naturally immortal. *Ergo*,

6. The soul is naturally immortal. And here these intermediate propositions may be reduced to so many categoric syllogisms, beginning with the last, and ending with the first.

§ 8. Though the rules given above, if duly attended to, would effectually prevent all sophistical reasoning; yet it Of Sophisms. may not be amiss to add a few words concerning what are called Sophisms or false reasonings; among which, the chief are: 1. That which is called *Ignoratio elenchi*, which is, when the dispute proceeds upon a mistake, occasioned by not attending to the true meaning or state of the question. 2. *Petitio principii*, which is, when in pretending to argue, the thing is taken for granted which was to be proved; this we call begging the question. 3. *Fallacia quatuor terminorum*, which is, when the intermediate term bears a different sense in the minor, from the sense in which it was used in the major. 4. *Non causa pro causa*, which is, when that is, by mistake, taken for a cause, which was not the cause; as, when a person receives his health consequent to the using such a medicine, and ascribes it to that, when perhaps it might really be owing to a medicine which he had used before. And 5thly, the last I shall mention, is that which ariseth from what is called the Association of Ideas, where because such ideas are connected merely by custom, we are apt to conceit they are connected in nature, as terrors with darkness. On which account it is of great importance in education, to take care that no ideas become associated by habit or custom but those that are connected in nature; and on the other hand, that those ideas that are really connected in nature be associated by habit or custom, that a sense of their connection may operate with the greater force in the conduct of life. And thus much for Syllogism.

§ 9. The last thing in logic, is that course of reasoning which is called method, which is only a regular proceeding Of Method. in connecting a large series of reasonings or instructions on any subject, and therefore truly belongs to this part of logic which treats of reasoning. For in delineating a whole science, or treating on any large subject, it is necessary to pursue it thro' a long chain of reasoning, or a whole series of propositions mutually related; in which it is of great importance, both for the clearer understanding it, and the better remembering it, that we carefully observe the order that nature itself points out to us; so as to begin with what is plain and simple, and thence to proceed gradually to what is more compounded and obscure; so ordering and ranging things through the whole process, that what goes before may continually reflect light upon what is to follow, and pave the way to it; and taking the utmost care to preserve evidence, or at least the highest possible degree of probability in every step, till we arrive at the highest truth and good, or the conclusion we aim at. In order to which, the best thing we can do, is to observe diligently the manner in which the best writers proceed, in treating on any subject they propose to handle, and particularly, the mathematicians, and moralists. Now, I say, such a series of reasonings we call Method; which, if it begin with effects, and ariseth to the discovery of causes, or with particular facts, parts or properties, and ariseth gradually to the whole, and to general principles, and conclusions, it is called the Analytical Method. But if it begin with causes already discovered, and descend to effects, or with general principles, and descend, by the application of them, to the illustration or proof of particulars or facts, it is called the Synthetical Method. The first is used in searching and discovering truth; the second chiefly in teaching it in the most compendious manner, when it is discovered.

§ 10. But in order to succeed well in the right use of our reason, be the form or method what it will, whether in Of the disin- thinking or reasoning by ourselves, or in a joint terested Love searching after truth, in our conversation with of Truth. others, which should be our only view in what is called disputation, it is of the greatest importance that we observe some such rules as these. 1. That we habitually consider the knowledge of truth, as being the highest perfection

and happiness of our minds, which therefore should be our grand pursuit, separate from every other consideration. 2. That accordingly we possess ourselves of an ardent and disinterested love of truth, for its own intrinsic excellency; and of the utmost aversion to all falsehood and deceit, or being any ways misled or imposed upon by false colors, and delusive appearances. 3. That in order to this, we honestly endeavor as much as possible to divest ourselves of all sinister views and prejudices, in favor of any vulgar opinions, pre-conceived schemes, or worldly interests, and guard ourselves against every untoward appetite or passion, that may darken or bias our minds, and so keep them as calm as possible, and open and ready to the impressions of the naked truth. 4. In order the better to come at truth, we must endeavor to consider, with the utmost attention, the things themselves, with all their various relations and connections, divested of the delusions and ambiguities of words, which are many times apt to mislead us. 5. And lastly, we must enlarge our views as much as possible, so as to take the whole of things into our consideration, without which we cannot make any tolerable judgment of what relates to particulars. If we would faithfully observe these and the like rules for the conduct of our understandings, and at the same time, be, above all things, concerned to do our duty, and to know the truth, with this honest view, to be governed by it in heart and life, with all humility, and without partiality or hypocrisy, we should not be in danger of being misled into any great or dangerous mistakes, but should attain to know the truth, and the truth would make us free, free from both error and vice, wherein consists the most abject slavery. And thus much for the several objects and operations of the understanding, which are the subject of logics.

CHAP. V

Of the Mind affecting, willing and acting.

§ 1. Having thus given some account of the subject of logics, which relate to the conduct of the intellect, in its various exertions, I now go on to give a short sketch of the subject of ethics, which relate to the conduct of our affections and behavior; of which no more is here intended, than what is just necessary, in order to the business of the next chapter. Here therefore, according

to what was observed above (Chap. I. § 12.) we are to treat, 1. Of our affecting or disaffecting things, according as they appear good or bad. 2. Of our choosing or refusing, willing, or nilling them, according as we affect or disaffect them, and, 3. Of our freely acting, or forbearing to act, according to the judgment and choice we have made. First then, we are to consider the affections or passions, of which we are conscious, and which next occur to be observed in the frame of our rational nature, the doctrine or explication of which is called pathology; for no sooner doth any object come under the mind's consideration, but it appears agreeable or disagreeable, according as it is, by the established law of our nature, attended with pleasure or pain, or, at least, with some degree of satisfaction or uneasiness, or the apprehension of it. Now, by the passions, we mean in general, such affections or disaffections, inclinations or aversions, as we experience in ourselves, upon feeling or expecting that pleasure or uneasiness with which any object is attended. And such is the law of union between our souls and bodies, that upon our being affected or disaffected towards any object, we are sensible of certain commotions and perturbations in our blood and spirits, corresponding and in proportion to those pleasing or displeasing apprehensions.

§ 2. Now the leading passion, and which seems in some degree to be at the bottom in all our passions, is what we call admiration or wonder, which, in a high degree, is called astonishment, and is that sentiment which we feel on the perception of any thing that is new, or great, or what we are unaccustomed to, or from which we have strong apprehensions of pleasure or uneasiness. And more particularly; when we are delighted in any thing, as being attended with pleasure, we are said to love it; and if we actually possess the pleasure, it is attended with joy. If the object of our affection be a person, our love may be called esteem; and if the person be in misery, it is called pity or compassion: And if the object be absent or future, it hath the name of desire or hope. On the other hand, when we are disaffected towards any object, apprehending it to be attended with pain or uneasiness, we are said to hate it; and the actual sufferance of that pain or uneasiness is called grief; and shame, if it arise from the consciousness of our own misconduct; and if the object be a mean and despicable character, the passion is called contempt; and if the evil be future and

impending, it is terror, or fear. If the object from which we feel or apprehend pleasure, be procured, or occur to us by means of any person or free agent, designing good to us, we call our sentiment on that occasion, benevolence, complacence and gratitude, attended with a desire to reward it; and with joy at any good, or grief at any ill that occurs to our friend or benefactor: and this temper, if it arise to a settled habit of mutual good-will and good offices, we call friendship. But, on the other hand, if the object from whence we feel or apprehend pain or uneasiness be procured or occur to us by means of any free agent, designing any evil or mischief to us, we call our sentiment on that occasion, malevolence, anger, or resentment, which is apt to be attended with a desire to revenge it; and with joy at any evil that befalls our enemy, or grief at any good that may occur to him, which is called envy. And if this temper groweth to a settled habit of ill-will towards the supposed injurious person, it acquireth the name of malice.

§ 3. These passions are natural to us, and, as such, must be considered as part of the frame of our natures, and consequently as being implanted in us by the Author of our nature, for answering very wise and good ends, relating to our happiness; and therefore are so far from being evil in themselves, that they have the nature of good, as well as all our other faculties, and so, like the rest, become morally good or evil, according to the good or ill use we make of them. Now as God hath so framed us, that our happiness should depend on a vigorous activity in the use of the powers and faculties he hath given us, his design in planting these passions in us, was, that they might be, as it were, spurs and incentives in us, to put us upon such a vigorous activity, in avoiding those things that are mischievous either to ourselves or others, and pursuing those things in which our happiness or that of others consists. For the passions are, as it were, the wings of the soul, by which it is carried on with vehemence and impetuosity in its several pursuits; and, as it were, its springs, by which it is animated and invigorated in all its exertions. Thus love, desire and hope, vigorously animate and spur us on to the pursuit of those things that we love, desire and hope for, as being connected with our well-being and happiness; and hatred, abhorrence and fear, engage us with the utmost vehemence to fly from, and guard against, those things that we abhor and dread, as tending to our misery. And as

benevolence, compassion and gratitude, inspire us with a delight in all those good offices in which both our personal and social happiness consists; so malevolence, aversion and anger, are useful to inspire us with indignation and zeal, in opposing all those impious and injurious practices that tend to the mischief and misery of society in general, as well as each particular person.

§ 4. So that the passions are designed to be, and are, in their nature, capable of being subservient to a multitude of excellent purposes; and all that is necessary to render them so, is, that there be a right judgment made, what objects we ought to affect or disaffect, as being really connected with our happiness or misery, either personal or social; and that they be duly balanced one with another, and rightly governed and moderated in proportion to the real value and importance of their respective objects. And for this purpose were we furnished with the powers of reason and conscience, that they might preside over our passions, and make a right judgment of their several objects, and thence prescribe laws to them, and restrain them from all exorbitancies and irregularities; that we might know what we ought to love or hate, to hope for or fear, to be pleased or displeased with, and in what proportion, and not to suffer them to exceed the real value and importance of things with regard to our true happiness. Since, therefore, the great Author of our nature aims at our happiness, and hath given us our passions to be subservient to it, and furnished us with reason, to govern and regulate them in such a manner as to render them useful to that end, it must be his will and law, and the law of our nature, that we should duly exercise our reason in the right government of them, so as not to suffer them to hurry us into such actions as our reason and conscience disallow, as being contrary to the eternal laws of justice and benevolence: and one of the chief concerns in culture and education is, to discipline and moderate the passions, and to inure them to a ready submission to the dictates of reason and conscience.

§ 5. And lastly, in consequence of any object's appearing agreeable or disagreeable to our minds, as tending to our pleasure or uneasiness, and being accordingly affected or disaffected, the last things I mentioned, of which we are conscious in ourselves, and which I shall here briefly take together, are the powers

of choosing the one, and refusing the other, and our wills to act, or not to act, with a power of free activity, whereby we are able spontaneously to exert ourselves for obtaining the one, and avoiding the other. Now, as our true happiness consists in being secure from all pain or uneasiness, which is called natural evil, and in being possessed of such pleasures and satisfactions as are suitable to our nature in the whole of it, which are called natural good; so our highest natural perfection consists in being capable of rightly judging and choosing for ourselves, and of a free and vigorous activity, conformable to our best judgment and choice, for avoiding the one, and attaining the other. And as our reason was plainly given us, to enable us to make a right judgment what we ought to choose and avoid, and to do and forbear, in order to our true happiness, in the whole of our nature and duration; and our will consists in freely resolving and determining ourselves to the one or the other, as they shall appear to our judgment; so our highest moral perfection consists in actually making a right judgment, what we ought to affect or disaffect, and to do and forbear; and in freely and habitually exerting ourselves in choosing and doing the one, and rejecting and forbearing the other, conformable thereunto. I say, freely; for freedom or liberty consisteth in having a power to act, or not to act, as we please, and consequently to suspend judging or acting, till we have taken opportunity to make as deliberate and exact a judgment as ever we can, what is best for us in the whole, to do or forbear; as necessity, on the other hand, considered as opposed to liberty, implieth, that it is out of our power to suspend acting, or to do otherwise than we do, in which case there can be neither praise nor blame.

§ 6. I say our highest moral perfection consists in freely doing what we know tends to make us entirely happy in the whole of our nature and duration: Of the right governing our Activity but then it must be considered, that, as God is our chief Good, our great Creator, Preserver and Governor, on whom we do entirely depend for our being, and for all our happiness, and all our hopes; and as He wills our happiness, as his end in giving and continuing our beings, and consequently every thing as a means, that is conducive to it; so it must be supposed to be implied in our highest moral perfection, that we be entirely devoted to Him, and do every thing conducive to our happiness, in rela-

tion to Him, ourselves, and one another, in a designed conformity to Him as our great Original and Pattern, and in compliance with his will, and from a sense of duty to Him as our supreme moral Governor. And consequently, that, as by reason of our great ignorance and weakness, we stand in much need of his instruction and assistance, in order to judge what is truly conducive to our happiness, and to put it in practice; it must imply a most grateful and ready submission to his instructions and injunctions, and dependance upon his aids and assistances to render all our endeavours successful, in the pursuit of our true and everlasting happiness. But the more particular prosecution of these subjects will be the business of Ethics or Moral Philosophy, especially as it is improved by Christianity.

CHAP. VI

Of the Progress of the Mind, from its first Notices, towards its utmost Perfection.

§ 1. Mean time, I would, in pursuance of my first design, make a few observations, agreeable to the sketch here laid down, on the gradual progress of the human mind, from the first notices of sense and intellect, to its highest perfection and happiness. And as to its first notices, they are doubtless those of sense, but directly joined with a consciousness of its perceptions. Warmth and hunger, and probably some pains, are, perhaps, all the sensations it hath before its birth; and when it comes into the light of this world, it is directly impressed with the sense of light and colors, as well as sounds, tastes, odors, and frequent uneasy and painful sensations, etc., all which still more and more awaken its consciousness; and every fresh notice of sense and consciousness, still goes on to excite its admiration, and engage its attention. And being a perfect stranger to every thing about it, it hath every thing to learn; to which it diligently applies itself, as its consciousness more and more awakens, upon the repetition, every moment, of fresh impressions of sense; till, by degrees, having a great number of feelings, tastes, odors, sounds, and visible objects, frequently repeating their several impressions, its conscious memory still enlarging, it begins, by means of the intellectual light, with which it finds its consciousness attended, gradually to collect and recollect the several relations and connections it observes to obtain

among its various ideas. And at length, when it is in ease, it discovereth a wonderful curiosity and delight in observing these connections, as well as being impressed with new ideas.

§ 2. It hath been made very evident both by reasoning and experiment,* “that the objects of sight and touch are entirely different and distinct things; that there is no necessary connection between them; that the things visible are only arbitrary signs of things tangible; that the one hath the nature of a language with regard to the other, and that the connection between them is to be learned only by experience, as that between words and the things signified by them.” And particularly, that as all visible objects or ideas are only in the mind; so a man born blind, and made to see, which must also be the case of infants, can have at first no notion of distance, nor of any connection between things visible and tangible, and consequently, that both distance and that connection must be learned by long trial and experience. It must, therefore, be a matter of great exercise of thought in an infant mind to learn this connection, and particularly, to learn the notion of the various distances and situations of things tangible, by its observations on the various degrees of strength or weakness, of vividness or faintness of the light reflected from them, in the things visible constantly connected with them. And, at the same time that it hath these things to learn, which must be a laborious work, as being the same thing with learning a language, it is also learning the names of things, and the connection and use of words, which is another language. And, as if all these were not task enough, it hath all this while, to be learning how to use its limbs, its hands in handling, its tongue, and other organs of speech, in making and imitating sounds, and its whole body in all its exertions, and particularly, at length, the poise of its center of gravity, and the use of its feet in walking.

§ 3. All these things require a great deal of earnest application, and the exercise of much thought and experience. So that it seems evident that those little creatures, from the beginning, do consider, reflect and think a prodigious deal more than we are commonly apt to imagine; and I do

* By Bishop Berkeley in his *Theory of Vision*; and *Philosophical Transactions*, No. 402.

not see how we can avoid admitting that the soul's capacity is as great from the first moment as ever it is. For it is plain, from what hath been said, that they learn two distinct languages within the two or three first years of their life to a good degree of perfection; I mean the connection between tangible and visible objects, and between both of them and words, and besides this, a considerable degree of dexterity in the use of their limbs, which is, doubtless, a great deal more than they ever learn in so much time afterwards. And consequently the reason why there appear so many little, low, weak and childish things in them, which we are apt to despise and think them beneath our notice, is not for want of good sense and capacity, but merely for want of experience and opportunity for intellectual improvements. Hence also it appears, that we ought to think little children to be persons of much more importance than we usually apprehend them to be; and how indulgent we should be to their inquisitive curiosity as being strangers; with how much candor, patience and care, we ought to bear with them and instruct them; with how much decency, honor and integrity, we ought to treat them; and how careful it concerns us to be, not to say or do any thing to them, or before them, that savors of falsehood or deceit, or that is in any kind indecent or vicious. *Pueris maxima debetur reverentia*, is a good trite old saying.

§ 4. For it is to be observed, in the next place, that while children are acquiring a general knowledge of the sensible world about them, they are at the same time learning the knowledge of the persons with whom they converse; their dependence on them, and the relations they stand in to them; and a notion of *meum* and *tuum*, and thence a very quick sense of justice and injury, as well as of good usage, benevolence and gratitude; all which appear obvious to them from consciousness and reflection, and attention to that inward, intuitive, intellectual light, which as I have observed (Chap. I. § 13. 14.) perpetually shines in upon their little minds, from the Deity, the Father of Lights, and the Father of their Spirits. Hence they soon apprehend the relations of causes and effects, of whole and parts, of things equal, greater or less, of things like and unlike, of the same and things different and contrary, of general names and notions, and analogies from things sensible to things spiritual and moral, of

actions necessary and voluntary, and of things done with design and by accident, &c. And by reflection and observation they judge of others by themselves. So that in three or four years, they do, with a little teaching, begin to have a notion of persons, as being an entirely different and distinct sort of beings from mere objects of sense. They soon know that a stone in falling, the water in running, the wind in blowing, and the fire in burning, &c., knows not what it does, and neither acts voluntarily, nor with design: whereas a man or a boy, they apprehend, if he does what is either pleasing or displeasing, beneficial or injurious to them, he knows what he does, and designs to do it, and might, if he would, do otherwise. From whence, as I said, they have a quick sense of good or ill usage, and consequently, of right and wrong, and of gratitude or resentment, according as they take themselves to be well, or ill treated.

§ 5. Hence, with regard to what they do themselves, they, by reflection, soon acquire the notions of free-agency, and of praise or blame, according to their Notions of agency, and of praise or blame, according to Praise and Blame, as they are conscious of their doing well or Shame and Guilt, etc. ill; *i. e.*, according as they are sensible they act a fit and a reasonable part on the one hand, or an unreasonable and injurious part on the other. Thence they soon learn to have a sense of shame and guilt upon their consciousness of having done amiss, and of satisfaction and self-applause, when they think they have done well. And hence they quickly learn the notions of law, conscience, sin and duty, especially if they have had the rules explained, and been duly chastized or applauded when they have done ill or well, by those on whom they know they have a dependence, and to whom they find themselves accountable; and to whom to account, as being both their benefactors and governors, they are conscious it is fit and reasonable, as they know they stand in much need of their help and conduct in order to their own well-being. All these things are obvious in children of four, five and six years old, and manifestly derive from that intellectual light, of which I have often been speaking. And the great concern of culture, and a right education, is to awaken their attention to this inward intuitive sense of true and false, good and bad, right and wrong; and to fix their attachment to the one, and their aversion to the other, by steadily affecting them with applause or blame, pleasure or pain, joy or grief, according as they affect or do the one or the other.

§ 6. And as the intellect and reason of children thus manifestly appears to dawn and improve, it ought to be continually encouraged and assisted by those that are about them, and especially those that have the conduct of them. As they are got into a world wherein every thing is new and strange to them, and for want of knowledge and experience, they are liable to many mistakes in their apprehensions, and to make a thousand blunders in their actions and conduct; and yet in their original simplicity and well-meaning, are ordinarily very inquisitive, and willing to be taught and conducted; it is mightily incumbent on those to whose care they are by providence committed, whether parents, nurses, guardians, masters or tutors, to consider them, with great candor, as strangers that need to be conducted and assisted; to be ready to answer their little questions, and to teach them to reason by candidly reasoning with them; and to apply themselves with great tenderness, patience and assiduity, to guide and instruct them. And as they grow capable of considering the connections of causes and effects, &c., they should open their minds, and turn their attention to the survey of all nature, and lead them to observe the contrivance, beauty and usefulness of every thing before their eyes, and especially those things they find most necessary, useful and pleasing to themselves, and on which their own subsistence and comfort more immediately depend; and thence conduct them to the apprehension, and some just conceptions, of the true cause of every thing in all nature, who is truly their Father and Author, and upholdeth their souls in life, and replenisheth them with his loving kindness and tender mercies; and who is the great common Father and Lord of all things, both in Heaven and Earth: and from these apprehensions, it will be easy to teach them to deduce their duty and obligations to Him, of love, gratitude, trust, resignation and obedience, and to be as like Him as ever they are able, pure as He is pure, righteous as He is righteous, and kind and merciful as He is; and to praise Him daily for every thing they enjoy, and pray to Him for whatsoever they want, and to live under an habitual sense of their dependance upon Him, and obligations to His infinite goodness. To which purposes, let them not only be taught to live in the daily exercise of devotion by themselves, but also steadily attend

on the public worship, both in the family, and at the church, where the sight and example of others, will mightily contribute to awaken and keep alive in their minds a sense of these things, which will be apt strongly to influence the conduct of their whole lives.

§ 7. And as they begin to grow acquainted with the family and neighborhood, and their connections with these Of moral and and those that are about them, and to see how political Conne- their own comfort and well-being depends on tions and Duties. the esteem, love and good offices of others, and that these depend on their own good conduct, and good offices towards them; they should have it inculcated upon them, that as they would be secure from all injuries, and the ill treatment of others, so they must avoid every thing that is injurious and abusive towards them; and as they would expect the benevolence and good offices of others, they must be full of good-will, and ready to every good office towards them; and consequently, delight in every honest, faithful, kind and obliging thing, whereby they may recommend themselves to the confidence, esteem and good-will of all mankind with whom they have to do. And as they go on to enlarge their acquaintance with the world about them, and to have a notion of their connections with the town in which they live, and the government and kingdom to which they belong, and, in general, with the whole species; they should be led on to a sense of order and public virtue, and the love of their country, and finally of the whole human kind, and to look for their own weal in that of the whole community, and even of the whole moral system, and to a conduct corresponding thereunto.

§ 8. And, as from their early acquaintance with the objects of their appetites, from whence they derive a very Of moderating exquisite pleasure, they contract a violent attach- their Appetites ment to them, and an impatience of whatever may and Passions. interrupt or control their gratification; and as this impetuosity is, in many instances, utterly inconsistent with their duty and true interest, both with regard to God and man, and a strong temptation to the violation of it; they should, from the beginning, be taught and inured to the practice of self-denial, and the moderation and restraint of their appetites and passions, and, as far as they are capable, be shown the reasonableness and necessity of their so doing, in order to their own truest

interest. In order to which, the widely different natures and interests of soul and body, and of time and eternity, should be explained to them, with the evidences of a future state; and consequently, of how much importance it is to them to be, in a good measure, disengaged from the body and time, so short and uncertain; and to cultivate the soul, and improve it in knowledge and virtue, of which they can never be dispossessed, not even by death itself, they being treasures which they can carry with them into another state, and that will last for ever. And as our real well-being depends on order, and as this depends on law and rule, of the fitness of which, they are not yet competent judges; tho' they are to be led to reason and judge for themselves, as fast as their capacity will admit of it; in the mean time, they should be taught and inured to humility and obedience to government, and even to an implicit obedience, till they are able to judge for themselves, and be kept, as much as possible, from all bad company, which will be extremely apt to mislead them.

§ 9. And as it is to be supposed, that children have all along, from their first capacity for it, been taught to read and write, it concerns those who have the conduct of them, to put them upon the practice of reading and writing, particularly with a view at enlarging and improving their minds, by directing them to read the most instructive and engaging things in history, poetry, and morality, and especially the most instructive and useful things in the Holy Scriptures; at the same time awakening their attention to them, and a right understanding of them. To which purpose, putting them upon writing out the most striking passages would be very conducive; as by this means their attention would be the more engaged, and they would have a little treasure of their own of the wisest and most useful things, and would put the greater value upon them, under the notion of their being a treasure of their own. And, by the way, care should be taken, as far as can consist with good government, to contrive to put and keep them always in a good humor, which will make every thing take the better effect.

§ 10. By this time they may begin to be led to a sense of the charms of music, and the mysteries of numbers and geometrical figures, and the reasonings and operations relating to them, as far as their capacities will admit, which are of

the greatest use, as they tend to ripen their minds, by inuring them to strong application, and a close way of thinking. But care should be taken that these exercises do not consist of mere abstractions, and barren and useless speculations, but be turned as much as possible to facts, and things practical and useful in life. And by the time they are ten or twelve years old, they may be taught from maps, a general notion of the earth, the situation of the several countries and kingdoms upon it, and considerable of the history of the several nations inhabiting it; and at the same time, from schemes and globes, a considerable notion of the heavens, and the system of the world in general, as well as this globe of the earth in particular. All which, would vastly tend to enlarge their minds, and give them a great and generous way of thinking.

§ 11. And now if they are designed for a public education, they are to be taught the principles of grammar and language, in which they should, indeed, begin to be initiated by six or seven years old; and the connection between their own and other languages, should be carefully explained, by instructing them in an English, Latin and French grammar, at the same time. So that by twelve or fourteen, they may become pretty well versed in the construction of speech, both Latin and French, as well as English; and in two or three more, of Greek and Hebrew, that they may be able to read the Holy Scriptures in those venerable and noble languages of antiquity, in which they were at first written, and other excellent pieces of oratory, history, poetry, and morality, which were the greatest works of genius, and have stood the test of time, and been handed down to us thro' the several ages of mankind. All which are of great use to refine and polish the mind, and give it a noble taste for the sublimest beauties, as well as the justest sentiments, and the finest maxims of true wisdom; which, therefore should be carefully pointed out, and illustrated to them, relating both to things human and divine: particularly some good rhetoric and poetry, with the mythology of the ancients, should now be explained, and they should begin to be well versed in the history of the world, both sacred and profane, and with it, the knowledge both of the times and places of the several facts, from geography and chronology, both ancient and modern. I would have them car-

ried as far as may be in these things by the time they arrive at the age of sixteen or eighteen.

§ 12. And now it will be time for them to have their minds closely turned inward upon themselves, to take an exact view of their intellectual powers, and the objects of them, by the studies of metaphysics and logics, in which they are taught the great principles of first self-evident truth, and how to make deductions from them; a thorough knowledge of the operations and procedure of the mind, and a just notion of right reasoning, and of ranging and methodizing their thoughts, from the several relations and connections of things. And upon this should at the same time be built a more critical knowledge of language, and its procedure from literal, to just figurative expressions of the sense of the mind; and from the true art of reasoning, which addresseth the understanding, to the right art of persuading, in address to the passions; which should be taught in such a manner, as to be so far from clouding, dazzling and misguiding the understanding, as to be rather subservient to it, by giving it a clear apprehension of its objects, and more strongly engaging its attention to the truth, and right of the case, as well as a love to it, and delight in it. To which purpose, the various styles in just writing, corresponding to the various subjects and purposes, should be critically understood, and every thing in thinking and speaking be reduced to the standard of truth and nature, without any sophistry, disguise or false coloring.

§ 13. And then, from the doctrine of just reasoning and exact speaking, it will be proper, in the next place, to lead the mind on to the sublime mathematics and the fine Arts. (the first and easiest things of this kind, being supposed to be already known.) And here there opens a spacious field of certainty and demonstration, highly raising and improving the mind in a vast scene of eternal truths, in the doctrine of numbers and magnitudes, and their various proportions; and that wonderful engine of mathematical reasoning, algebra, by the help of which, the mind works itself into the discovery and understanding of the sublimest truths, and traverseth the whole visible creation of God, in which all things are found to be done conformable to those sublime principles. And as the mind is sup-

posed to have been already conversant in eloquence, poetry and music, so it should now be led into a taste of the other fine arts, painting, sculpture and architecture, which do in some measure depend on the knowledge of mathematical proportions.

§ 14. I could wish the minds of children, as I observed above, were early initiated in the study of nature, by
 Of Physics being led into the easiest and most delightful
 and Astronomy. things in natural history, and a general survey of
 the mighty works of God, both in heaven and
 earth; to which, as they further ripen, their attention should be
 now more strongly turned by a variety of experiments. And when
 they are furnished with a considerable apparatus in the skill of
 mathematical reasoning, they should next be taught to apply it in
 physics, or the study of nature, the laws of motion, gravitation,
 elasticity, electricity, light, colors, sounds and other sensible quali-
 ties; and from thence proceed to the knowledge of every thing that
 can be discovered in the elements, earth, water, air and fire, and in
 all the various tribes of creatures in this terraqueous globe, both
 mineral, vegetable and animal; in all which they must be led to
 take notice of the wonderful art, connections, design and contriv-
 ance that manifestly appear in them all, and of every thing that is
 useful for the comfort and elegance of life, while we continue in
 this present state. And in consequence of these things, they should
 be further led on to observe and understand the connection of this
 globe itself, and all the creatures in it, with the sun, the fountain
 of all light and life to the whole system of the planets and comets
 belonging to him, and depending on him, and the prodigious host
 of stars analogous to him, on whom the like systems may be sup-
 posed to depend, which are the subjects of astronomy. And here,
 the contemplation of that world of things extremely little beneath
 us, as well as things vastly great, distant and remote from us, alike
 beyond the ken of the naked eye, and discovered only by the help
 of optic glasses, equally demand their attention, prodigiously en-
 large their imaginations and understandings, and, at the same
 time, lead them to the most grand and august apprehensions of the
 Deity, and of his most extensive benevolence to all his whole
 family, in heaven and earth. And from a sense of the beauty,
 harmony, order and usefulness appearing in the whole system of
 nature, they are led to a sense of the like beauty, harmony and

order, which ought to obtain in the moral system, and the happiness resulting from it, which now should be the subject of their most intense study, according to that excellent saying of Tully, *Homo ortus est ad mundum contemplandum et imitandum*.

§ 15. For as the mind, from the first dawning of intellect and reason, hath been supposed, from the contemplation Of Theology of itself, and the sensible world surrounding it, and and Morals. the instruction of those about it, to be convinced of the existence of the Deity, the Author of all things, and gradually attaining just notions of Him who is the great Father of Spirits; so now it must be led on further, in moral philosophy, theology, ethics, &c. to the contemplation of Him, and that world of spirits derived from Him, dependent on Him, and subjected to his supreme dominion and government, in which He seeks to lead them gradually on thro' a course of discipline, to their highest perfection and happiness in their knowledge of Him, conformity to Him, and enjoyment of Him, their sovereign good, as the great end of their existence, and all his dispensations towards them. Here then opens another vast scene of necessary and eternal truths. In order to which, the first study is to gain a right knowledge of ourselves, our own intellectual and active powers, our various affections and exertions, by consciousness and reflection; and thence to form a notion, not only of other created spirits, but especially of God, the great Parent Spirit, by substituting the greatest both natural and moral perfections we find in ourselves wherewith to conceive of Him and his dispensations towards us, removing from them all limitation and imperfection. And by the intellectual light wherewith he perpetually irradiateth our minds, we not only see his absolute independence and necessary existence, but also our own entire dependence on Him, and our relation and obligations to Him; from whence evidently resulteth the fitness, decency and duty of all those affections, and that behavior which we manifestly owe to Him, and are comprehended under the general names of piety and adoration. And by the same light attending our looking inward on ourselves, and considering our own nature, and our relations and connections one with another, we, in like manner, evidently discern what affections and behavior are fit, decent and due from us to ourselves, and to each other, implied in the terms moderation, probity and benevolence; and also that happiness and self-enjoy-

ment which resulteth from being conscious of our affecting and behaving accordingly, as well as the remorse and misery arising from our affecting and acting otherwise. Thus our perception of eternal truth, and love of order, in conformity to it, leadeth the mind to its union with the eternal God, and the happiness of his everlasting kingdom, in the conduct and government of the world, which consisteth in the universal order, harmony and happiness of all intelligent active beings that are qualified for it.

§ 16. But as we are by the condition of our natures or circumstances, especially the human species, cantoned out Of Economy into various particular societies, it is necessary, in and Politics. order to our perfection, that we be trained up to act a good part, under the discipline of these societies in our progress towards it. The first is that of the family to which we belong. This leads us to the study of economy, which provideth for the weal of these first rudiments of society founded in nature, in which we are to be carried thro' the first stage of life, and fitted to act a good part in making a further progress towards our perfection, under the discipline of the civil community to which we belong, which is founded in compact, either explicit or tacit, being a voluntary combination of a great number of individuals to promote their welfare in the common good of the whole community; in which, each one is to seek his own weal and happiness, both temporal and spiritual. Hence ariseth polity, or the art of good government, both civil and ecclesiastical; which consisteth in the communities agreeing on certain rules and laws founded in the common interest, and enforced by proper sanctions, in conformity to which, every individual is to resign to the public or prevailing sense (at least as far as his duty to God will permit) as being the safest and most rational method he can take, in order to secure his own best interest and happiness. To which, therefore, it will much conduce, that every one be trained up in this spirit of resignation to the public sense, as far as possible, and in an ardent love of the public good of his country and public order; in an exact knowledge of it, and the laws founded in it, joined with a faithful conformity to them. And lastly, in an earnest zeal and activity in whatever may tend to promote the public interest; being constantly taught the glory of public virtue and usefulness, and deserving well of mankind.

§ 17. But as we are attended with innumerable impressions of sense, and solicitations of imagination and appetite, continually diverting our attention and affections from these reflections, and the inward light attending them, and advancing us to our highest Perfection. and strongly tempting us to the violation of order and law, both moral and political: it must be observed, lastly, that God hath

from the beginning, in great compassion to mankind, instructed us more perfectly in the knowledge of these most important things by revelation, wherein He hath used a variety of means to engage our attention to them, and to reclaim us to order, and restore us to his favor, upon our deviation from them, in order to our true happiness. And to these purposes, He hath condescended to accommodate himself to the low capacities of the general rate of mankind, by using various types and emblems, and a most beautiful and instructive language taken from what is familiar among us, wherewith to represent and shadow forth his perfections and dispensations, which are vastly above our comprehension; the nature and intent of which language should be critically considered, and well understood; and the beautiful analogies drawn from things sensible and imaginable, to things intelligible, spiritual and moral. Particularly, in the dispensation of his grace, for our recovery from the power and guilt of sin, to his image and favor, by the mediation of his Son, and the influence of his Spirit. It is not his design to teach us precise philosophical notions and verities, as matters of mere speculation, but rather chiefly by as exact conceptions as we are at present capable of, borrowed from things common and familiar to us, to promote in us pure and holy affections and all manner of virtuous dispositions and practices; to wean and disengage us from fleeting and sensible things, and low animal pursuits and gratifications, which we are shortly to leave; and to awaken and engage our attention to spiritual, eternal and immutable things, the objects of reason and faith; that we may not look at the things that are seen, which are temporal, as terminating our prospect but may look through them to the things that are not seen, which are eternal; and that we may learn to love and delight in Him, who is all in all, our chief and sovereign good, and to advance ourselves to as near a resemblance to Him as our natures will admit of; that by our con-

formity to Him, and the imitation of Him, we may, through the great Mediator, his blessed Son, and by the help of his holy Spirit, be entirely secure of his favor, and for ever happy in Him, ourselves and one another. Here then we arrive at our perfect consummation and bliss; our highest perfection and happiness, both intellectual and moral, in the clearest knowledge of Him and ourselves, that our minds can admit of, and the entire union of our wills, affections and behavior to his will, and the purity and holiness of his nature, and the blessed designs of his kingdom. So that it is by this holy discipline of christianity that we are daily to inure ourselves to a due disengagedness from this uncertain sensible scene, and to improve ourselves in the knowledge and love of things unchangeable and eternal, and in the exercise of devotion towards God, and the imitation of Him, till we are qualified to quit this our present station, and enter upon that eternal life of contemplation and devotion, and of universal purity, probity and benevolence, which is to be our highest perfection and everlasting happiness in the future state of our existence.

FINIS

A BEAUTIFUL SUMMARY DESCRIPTION OF UNIVERSAL NATURE

By Bishop Berkeley, in reasoning against the sceptics, near the beginning of the second of his *Three Dialogues*.

Look! Are not the fields covered with a delightful verdure? Is there not something in the woods and groves, in the rivers and clear springs, that soothes, that softens, that transports the soul? At the prospect of the wide and deep ocean, or some huge mountain, whose top is lost in the clouds, or of an old gloomy forest, are not our minds filled with a pleasing horror? Even in the rocks and deserts, is there not an agreeable wildness? How sincere a pleasure it is to behold the natural beauties of the earth! To preserve and renew our relish for them, is not the veil of night alternately drawn over her face, and doth she not change her dress with the seasons? How aptly are the elements disposed? What variety and use in stones and metals, and even in the meanest productions of nature? What delicacy, what beauty, what contrivance in vegetable and animal bodies? How exquisitely are all things suited as well to their particular ends, as to constitute apposite parts of the whole? And while they mutually aid and support, do they not also set off and illustrate each other? Raise now your thoughts from this ball of earth, to all those wondrous luminaries that adorn the high arch of heaven. What an insupportably splendid and glorious body is the sun, the center of this our system, and the inexhaustible fountain of that vast ætherial fluid, which is the light and life of this whole creation? The motion and situation of the planets, are they not admirable for use and order? Were those (miscalled erratic) globes e'er known to stray in their repeated journeys through the pathless void? Do they not measure areas round the sun, ever proportioned to the times? So fixed, so immutable are the laws by which the unseen author of nature actuates the universe! How vivid and radiant is the lustre of the fixed stars? How magnificent and rich that negligent profusion, with which they appear to be scattered throughout the whole azure vault? Yet if you take the telescope, it

brings into your sight a new host of stars that escape the naked eye. Here they seem contiguous and minute, but to a nearer view, immense orbs of light, at various distances, far sunk in the abyss of space! Now you must call imagination to your aid. The feeble narrow sense cannot descry innumerable worlds revolving round the central fires; and in those worlds the energy of an All-perfect Mind displayed in endless forms! But neither sense nor imagination are big enough to comprehend the boundless extent, with all its glittering furniture! Though the laboring mind exert and strain each power to its utmost reach, there still stands out ungrasped a surplusage immeasurable! Yet all the vast bodies that compose this mighty frame, how distant and remote soever, are by some secret mechanism, some divine art and force, linked in a mutual dependence and intercourse with each other; even with this earth, which was almost slipt from my thoughts, and lost in the crowd of worlds! Is not the whole system immense, beautiful, glorious, beyond expression, and beyond thought? What treatment then do those philosophers deserve, who would deprive these noble and delightful scenes of all reality? How should those principles be entertained, that lead us to think all the visible beauty of the creation a false imaginary glare?

A PHILOSOPHICAL MEDITATION

Or Prayer, of the late Archbishop of Cambray: In his demonstration of the existence of God, as it is expressed (nearly)¹ by Bishop Berkeley, in the *Guardian*, No. 69.

O my God, if the greater number of mankind do not discover Thee in that glorious show of nature which thou hast placed before our eyes, it is not because thou art far from every one of us, [for it is in Thee that we live, and move, and have our being]: Thou art present to us more than any object which we touch with our hands, but our senses and the passions which they produce in us, turn our attention from Thee. Thy light shines in the midst of darkness, but the darkness comprehend[eth] it not. Thou, O Lord, dost every where display thyself; Thou shinest forth in all thy works, but art not regarded by heedless and unthinking man. The whole creation talks aloud of Thee, and echoes with the repetition of Thy holy Name. But such is our insensibility, that we are deaf to the great and universal voice of nature. Thou art every where about us, and [with]in us, but we wander from ourselves, become strangers to our own souls, and do not apprehend Thy presense. O Thou, who art the eternal Fountain of Light and Beauty; who art the Ancient of Days, without Beginning, and without End: O Thou, who art the Life of all that truly live, those can never fail to find Thee who seek for Thee within themselves. But alas! the very gifts which Thou bestowest upon us do so employ our thoughts, that they divert us from perceiving the hand that conveys them to us. We live in Thee, and by Thee, and yet we live without thinking of Thee. But, O Lord, what is life in the ignorance of Thee? A dead inactive piece of matter, a flower that withers, a river that glides away, a palace that hastens to its ruin, a picture made up of fading colors, a mass of shining ore; [these, and such things as these,] strike our imagina-

¹ The passages in brackets indicate Johnson's additions to Berkeley. The passages in Berkeley omitted by Johnson are given in footnotes. The manuscript copy by Samuel Johnson of Berkeley's prayer is entitled: "A Philosophical Address to God." [The Editors.]

tions, and make us sensible of their existence, we regard them as objects capable of giving us pleasure, not considering that thou conveyest [to us,] through them, all the pleasure which we imagine they give us. Such empty objects of sense as are only the shadows of being, take up and engage our low and groveling thoughts, while that beauty which Thou hast poured out on Thy creation is as a veil that hides Thee from our eyes. As Thou art a Being too pure and exalted to pass thro' our senses, Thou are not regarded by men who have debased their nature, and made themselves like the beasts that perish. So infatuated are they, that notwithstanding they know what is [truth and good,] wisdom and virtue, [law and order,] which (tho' the most real and stable things) have neither figure, nor color, nor sound, nor taste, nor smell, nor any other sensible quality, yet they can doubt of Thy existence, because Thou art not apprehended by the grosser organs of sense. Wretches that we are! we consider shadows as realities, and truth as a phantom: that which is nothing is all to us, and that which is all appears to us as nothing. [But] what do we see in all nature but Thee, O my God? Thou and only Thou appearest in every thing. When I consider Thee, O Lord, I am swallowed up, and lost in the contemplation of Thee. Every thing besides Thee, even my own existence, vanishes and disappears in contemplation of Thee: I am astonished and fall into nothing when I think of Thee! The man who does not see Thee has beheld nothing: he who does not taste Thee has a relish of nothing; his being is vain, and his life but a dream.² How unhappy is that soul who without the sense of Thee has no God, no hope, no comfort to support him? On the contrary, how happy is the man that searches, sighs and thirsts after Thee? But he only is fully happy, on whom thou liftest up the light of Thy countenance, [and who, being conformed to Thee,]³ enjoys in Thy loving kindness the completion of all his desires.⁴ Thou therefore, O my God, art the God of my life, my joy and my hope. Thou wilt guide me with Thy

² Johnson here omits the following passage of Berkeley's: "Set up Thyself, O Lord, set up Thyself that we may behold Thee. As wax consumes before the fire and as smoke is driven away, so let Thy enemies vanish out of Thy presence." [The Editors.]

³ Berkeley reads: "Whose tears Thou hast wiped away, and who—" [The Editors.]

⁴ The following is Berkeley's version from this point on: "How long, how long, O Lord, shall I wait for that day when I shall possess in Thy presence

brings into your sight a new host of stars that escape the naked eye. path of life; in thy presence is fulness of joy, and at Thy right hand there are pleasures for evermore. Whom then have I in heaven but Thee? And there is nothing in earth that I will desire in comparison of Thee. My flesh and my heart faileth: but Thou, O my God, art the strength of my heart, and my portion for ever.

fulness of joy, and pleasures forevermore? O my God, in this pleasing hope my bones rejoice and cry out, who is like unto Thee? My heart melts away, and my soul faints within me, when I look up to Thee who art the God of my life, and my portion to all eternity.” [The Editors.]

The End

A more accurate TABLE, for the Partition of the Sciences, than that, Page 368.

CLCLOPAEDIA, is the whole circle of learning, which implies the knowledge of every thing that may contribute to our true happiness, both in theory and practice, and consists of two parts.

<p>I. <i>Philology</i>, or the study of Language or Signs, called also <i>Humanity</i>, and the <i>Belles Lettres</i>, and is,</p>	<p>1. <i>General</i>, or common to all kinds of speaking, in, 2. <i>Special</i>, of particular kinds of speaking or writing, as</p>	<p>1. <i>Grammar</i>, or the rules of pure language, and 2. <i>Rhetoric</i>, or the rules of figurative speech. 1. <i>Oratory</i>, which treats of eloquence. 2. <i>History</i>, which exactly relates real facts. 3. <i>Poetry</i>, which describes things in a just and elevated manner, whether real or imaginary; and to all these belongs the Art of <i>Criticism</i>.</p>
<p>II. <i>Philosophy</i>, or the study of wisdom, being the knowledge of things signified together with a practice correspondent thereto, in both which consists our true happiness. And all things or beings are,</p>	<p>1. <i>Bodies</i>, or sensible things, which constitute the natural world, the knowledge of which is, in a large sense, called <i>Physics</i>, or <i>Natural Philosophy</i>, and is, Or, 2. <i>Spirits</i>, or intelligent moral beings, which constitute the intelligent or moral world, the knowledge of which, in a large sense of the words, may be called <i>Metaphysics</i>, and <i>Moral Philosophy</i>, and is,</p>	<p>1. <i>General</i>, which treats of the common affections of bodies, number and magnitude, in <i>Mathematics</i>, including <i>Arithmetic</i> and <i>Geometry</i>. 2. <i>Special</i>, of all particular things in the natural world: Particularly, a. <i>Mechanics</i>, of the general nature and qualities of bodies and the laws of motion. b. <i>Geology</i>, of this terraqueous globe, and all the particular kinds of bodies in it, inanimate and animate. And c. <i>Astronomy</i>, of the heavens and stars, and the entire mundane system. Under each of which heads there are many practical matters. And the facts in all nature are related in <i>Natural History</i>. 1. <i>Speculative</i>, or what relates to the knowledge of intellectual things. a. In <i>General</i>, the <i>Noetica</i> or <i>Logic</i>, including both <i>Ontology</i>, of being, and <i>Dialectic</i>, of the conduct of the mind in thinking or reasoning. b. In <i>Special</i>, <i>Pneumatology</i>, of the several kinds of created intelligences, men and angels. c. <i>Theology</i>, of the DEITY, the great Father and Lord of them all. 2. <i>Practical</i>, or what relates to life and conduct, in our several capacities, personal and social. a. <i>Ethics</i>, of the conduct of our temper and behavior in general, in all our relations, in order to our true happiness. b. <i>Economics</i>, of the prudent conduct of families. And, c. <i>Politics</i>, of the wise government of States, Civil and Ecclesiastical. And the facts in the moral world are related in <i>Biography</i>, and <i>Civil</i> and <i>Ecclesiastical History</i>.</p>

A SHORT / SYSTEM / OF / MORALS. /

ETHICA: / Or the First Principles of / Moral Philosophy; / And especially that Part which is called / ETHICS. / In a CHAIN of necessary Consequences / from certain Facts. / Remember this, and show yourselves men. Isaiah xlii. 8. / This is your reasonable Service. St. Paul, Rom. xii. 1. / *Haec tractanti animo, & noctes & dies cogitanti, existit illa / a Deo Delphis praecepta cognito, ut Ipsa se mens agnoscat, / conjunctamque cum Mente Divinâ se sentiat; ex quo, in- / satiabili Gaudio completur.* Cic. Tusc. Disp. / *Discite, O miseri! Et causas cognoscite rerum, / Quid sumus? Et quidnam victuri gignimur? Ordo / Quis datus? — Quem Te Deus esse / Jussit? Et humanâ quâ parte locatus es in Re?* / Pers. Sat. 3. / The SECOND EDITION. / PHILADELPHIA: / Printed by B. Franklin, and D. Hall, at the New-Printing-Office, near the Market. 1752. /

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What is here attempted, is a short system of ethics and morals (chiefly for the use of young beginners) which have, of late, been called The Religion of Nature; by which I would not be understood to mean a system of truths and duties which mere natural reason would ever, of itself, have discovered, in the present condition of mankind, without the assistance of revelation or instruction; for it is but a very little of God and religion, or of truth and duty, that man, in his present state, utterly uninstructed, is able to discover by his mere natural powers, as the fact hath abundantly demonstrated, where the ancient instructions were lost. Nor can it, indeed, be imagined, from the goodness of God, that when he first brought man into being, a stranger to every thing about him, that he would leave him to grope out every thing that was necessary, or even expedient, in order to answer the end of his being, his true happiness, without instruction, even in language and nature, as well as religion and morals; or, that when he had been surprised by a temptation, and fallen into sin, that he would leave him to perish with-

out giving him further instructions, to be handed down to his posterity, how he and they should return to their duty, and regain his favor. And that the fact was accordingly, we are assured from the most ancient accounts of the first condition of mankind. What I would therefore be understood to mean by Ethics, or the Religion of Nature, is, that system of truths and duties, which, tho' they are not obvious to our weak reason, without revelation or instruction, yet when discovered, whether by the one or the other, do evidently appear, upon the consideration, to be founded in the first principles of reason and nature; in the nature of God and man, and the various relations that subsist between them; and from thence to be capable even of strict demonstration.

We know there are a great number of truths in mathematics and natural philosophy, which not one in ten thousand of the bulk of mankind would ever have thought of, if it had not been for such great men as Euclid, Apollonius, Archimedes and Sir Isaac Newton, etc., which yet may, safely, and with great advantage, be received upon their authority, and be accordingly practiced upon, by those who have not leisure or ability to attend to the reasons of them. And now they have led the way, it is not very difficult for those, who are capable of thinking closely, to enter into the demonstrations of them. The case is much the same as to moral truths and duties, with regard to the authority of prophets and law-givers. It is the part of the prophet or law-giver, as such, to discover truths, and enjoin laws, as rules of behavior to the people, who are to receive them upon their authority, as having but little leisure or capacity to exercise their reason about them, and therefore if they find no weighty reason against them, they act rationally in so doing. And it is the part of the philosopher, as such, as far as it is practicable, to enter into the reasons and demonstrations, on which those truths and duties are originally founded.

Such a short delineation of morals, may, perhaps, be of some use, especially in these times, wherein there is a sect arisen, or rather revived, that is continually decrying morality, as tho' it were only carnal reason, and no part of christianity, nor scarce consistent with it. This, it may be presumed, they would scarcely do, if they duly considered what morality truly is. And, on the other hand, as one extreme is apt to beget another, it is to be feared there may be another sect arisen, or gaining ground, who from too

just an indignation at those absurd notions of christianity, are in danger, for want of due consideration, of not only setting light by that, but even of losing all serious sense of the true extent and obligations of morality itself. It is therefore the design of the following pages, to endeavor to give a just notion of it, and the reasons on which it is founded, and to show its extent and vast importance, and what connection there is between it and christianity.

I would only advertise this one thing further: that no speculation or demonstration whatsoever, is of any further real use to us, than so far forth as it directs or engages us in life and practice, on which our happiness all depends.⁵ And, as our reason in these things, is, at best, but very dark and weak, it is of the greatest importance to us, that we diligently study the holy oracles, in which we have the sublimest and most advantageous instructions and incentives to practice, with regard to these matters, which are of the utmost importance to our true and everlasting happiness. However, as we are reasonable creatures, and obliged, as such, to yield unto God, the author of our beings, a reasonable service, it may be of very good use for us, as far as it will go, with an implicit submission to Him for the rest, to exercise our reason upon these great and important subjects.

⁵ From here to end of paragraph not in the first edition. [The Editors.]

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N. B.⁶ There are several principles of reasoning supposed in the following tract, as having been known from the *Noetica*: however, as this may fall into some hands that have not that tract, I hope I may be excused, if there be in this some repetitions.

⁶ Enlarged by Will Smith in the third edition to:

“ADVERTISEMENT.

“As the following Tract was originally published without the foregoing one, the Author hopes he may be excused, if some repetitions are still found in it. These at first he could not avoid, to make this Summary of Ethics intelligible to those who might not see the foregoing Logic and Metaphysics; and now it is not easy to get entirely rid of what was originally interwoven with the thread of the following discourse, without new-modeling the whole, which the Author's other engagements will hardly, for the future, allow him either leisure or inclination to do. These repetitions are, however, reduced to as small a number as possible, and several principles of reasoning are now assumed in this Tract, as supposed to be known from the former.” [The Editors.]

ETHICS OR MORAL PHILOSOPHY

THE INTRODUCTION

Of the Nature of Ethics, or Moral Philosophy, in general.

1. As natural philosophy is the knowledge of the natural world, or the world of bodies, and the general laws of the corporeal nature, together with all those practical matters thereon depending, that promote our comfortable subsistence and well-being in this present state; so moral philosophy is the knowledge of the moral world; the world of spirits, or intelligent free agents, and the general laws of the moral nature; together with all that practical conduct and behavior thereon depending, that is necessary to promote our true happiness, both in our present and future state. And as the *Noetica* imply all those instructions and means, that relate to the improvement and conduct of our understandings in pursuit of the knowledge of truth: so the *Ethica* imply all those instructions and means that relate to the regulation and conduct of our affections, actions and behaviors, in pursuit of the enjoyment of our true and chief good.

2. The world of intelligent free agents, indeed, comprehends the whole system of created spirits, both angels and men, and whatever other species there may be, considered as being derived from, and under the conduct and government of Almighty God, the Author, the Father and Lord of all. But what I mean chiefly to insist upon, is, the knowledge of ourselves, as we are men, or a moral system of rational animals, in all the relations wherein we stand, both with regard to God, ourselves, and one another, with a behavior suitable thereunto (without considering us particularly either in our economical or political capacities) which is the foundation of all the rest, and is usually termed Ethics.

3. Ethics is the art of living happily, by the right knowledge of ourselves, and the practice of virtue: our happiness being the end, and knowledge and virtue, the means to that end.

4. We are said to live happily when we enjoy ourselves, and all that is really good for us, in the whole of our nature and dura-

tion; *i. e.*, considered, not only as sensitive, but as reasonable, free, active, social and immortal creatures. For happiness means that pleasure which ariseth in us from our enjoyment of ourselves, and all that is really good for us, or suitable to our natures, and conducive to our happiness in the whole.

5. The enjoyment of ourselves, and all that is truly good, depends on a good habit, or state of the soul, united with, and delighting in its proper objects, which are truth and good; the first being the object of the understanding, and the other of the will and affections: and this good habit is the same thing with virtue.

6. Virtue consists in that integrity, firmness and stability of the soul, whereby we do honestly and steadfastly persist, in spite of all temptations to the contrary, in the love and practice of moral good, and the hatred and forbearance of moral evil: vice is the contrary.

7. Moral good consists in freely choosing and doing whatsoever truth and right reason dictate as necessary to be chosen and done, in order to our true happiness: moral evil, the contrary; for moral good must mean, the good of a moral agent; *i. e.*, of a rational, conscious, free, self-exerting and self-determining agent.

8. There are two things necessary to be considered, with respect to the nature of moral good: *viz.*, the criterion, or test by which, in the right use of our reason, we determine what we ought to do, or forbear; and the obligations we thereupon find ourselves under to the practice of it.

9. (I.) The test, whereby we determine what we ought to do or forbear, or what those actions and forbearances are, which are to be chosen and done, is the natural good of them, or that pleasure and happiness in the whole of our nature and duration, which naturally attends them. For we find by experience, that some things, affections and actions, are, in the very nature of them, attended with pleasure or happiness, either to the mind, as perceptive of truth, or to the will and affections, as desirous of good; and others with pain or misery, in respect to the one or the other. In some we have a quick sense of the decent and amiable, which delight the mind; and in others, of the deformed and odious, which displease it. In some we perceive the advantage, in others the mischief attending them, to ourselves or others; and accordingly, the former are attended with inward tranquility, acqui-

escence, and self-approbation, and the latter with anxiety, remorse, and self-reproach. And as ease, pleasure or happiness, is what we call natural good; to uneasiness, pain or misery, we call natural evil.

10. But in order to make a right judgment of natural good and evil, as being the test of moral, we must (as I said) take into the account, the whole of our nature and duration, as being sensitive and rational, social and immortal creatures. It must therefore be the good and happiness of the whole human nature, and the whole moral system, in time, and to all eternity. Hence the good of the animal body, or the pleasure of sense, is but imaginary, and ceaseth to be good, and hath even the nature of evil, so far forth as it is inconsistent with the good and happiness of the soul: which is also the case of private good, so far forth as it is inconsistent with the good of the public; and temporal good, so far forth as it is inconsistent with that which is eternal.

11. And this our good and happiness in the whole, does necessarily coincide with, and even result from, the truth and nature of things, or things, affections and actions, considered as being what they really are; * for thus to consider them, is the same thing with considering them as being fit and tending, in the nature of them, to render our rational, social and immortal nature, in the whole ultimately happy. And such affections and actions, correspondent to such natures and characters, must be necessarily and eternally fit; it being impossible to conceive of such natures and relations but such moral affections and actions will result as fit and right, and the contrary, as unfit and wrong. So that the general good of the whole, the nature and fitness of things, and the truth of things, or things considered as being what they are, are, as I apprehend, really coincident, and do, in effect, come to the same thing, in settling the criterion of right and wrong, or the test whereby we must determine what we are to choose or avoid, and to do or forbear.

12. Moral good must therefore consist in freely choosing and acting conformable to the truth and nature of things; or to things, affections and actions, considered as being what they really are, *i. e.*, as tending, or not tending to our true happiness, as being what we really are. Or (which is the same thing) in choosing and acting according to the fitness of things, or to things, affections and

* *Vide* Clarke, and Wollaston.

actions, considered as fit or subservient, in their own nature, to promote our best good and happiness in the whole. And this again is the same thing with acting according to right reason (which has been sometimes called the criterion) it being by the right use of our reason that we apprehend things as being what they really are, and discover which those things, affections and actions are, that do, in the nature of them, tend to our true happiness in the whole; and thereby judge what we must do and avoid, and form rules by which we must act in all our conduct and behavior, so as to be truly happy.

13. (II.) The obligation we are under, as moral agents, to practise accordingly, implieth some law, binding us, under certain penalties, to such actions as are morally good, and to forbear the contrary; and this constitutes the notions of duty and sin, and is two-fold, natural and internal, or external and moral.

14. (I.) The natural and internal obligation to the practice of moral virtue ariseth from the law of our nature, [or that law which God hath established within our own breasts, and in the frame of our nature. And this is the law of self-love, and self-preservation, and the law of benevolence.

15. (1.) The law of reason and conscience is, I think, the same thing which some have called the moral sense,* being a kind of quick and almost intuitive sense of right and wrong, deriving, as I conceive, from the perpetual presence and irradiation of the Deity in our minds, and dictating with a strong and commanding force what is reasonable, fair and decent, and so fit and right to be done, and giving us applause and satisfaction when we conform to it, and blaming and reproaching us, and filling us with uneasiness and remorse, when we act contrary to its dictates: it being the law of our nature, that we should affect and act conformable to the inward sense of our minds and consciences. And those consequent pleasing or uneasy sentiments, considering it as a law, are its sanctions.] ⁷

16. (2.) The law of self-love and self-preservation, which makes us solicitous for the continuance of our existence, and the enjoyment of ourselves, and ariseth from the consciousness of our existence, and of pleasure or pain, naturally attending certain condi-

* *Vide* Shaftsbury, Hutcheson, and Preceptor, or Turnbull.

⁷ Brackets indicate portions not in the first edition. [The Editors.]

tions in which we are, or may be, or the contrary; which therefore are its sanctions. For it is manifest that we are, by the Author of our Nature, laid under a necessity of valuing ourselves and our own interest, and of seeking and persuing our own preservation and well-being or happiness, and whatever we find tends to it, or is connected with it; and consequently that of the society to which we belong, with which we find our own is, in the nature of things, necessarily connected.

17. [From whence ariseth (thirdly) the law of benevolence, or that disposition we find also implanted in us towards the good of others, arising from reflection, whereby we are led to put ourselves in each other's stead, and to have a secret pleasure or uneasiness in the good or ill conditions of others, from a consciousness of our own, in the like situation; which sentiments therefore are its sanctions.] ⁸ This principle makes us desirous of each other's esteem and goodwill, and puts us upon doing what we know may be pleasing and advantageous to each other, and to the whole; so that self and social good cannot be considered in themselves, as at all interfering, but as being entirely coincident and subservient to each other.

18. But while we rest here, and act upon no other views or motives than these laws of our nature suggest [without considering them as being the laws of the God (or the author) of nature;] ⁹ though what we do, may be said, according to the common acceptation, to be merely morally good or evil, and virtuous or vicious; yet there will be nothing in it (however firm and stable our conduct be) that can properly be called religion, which must ever enter into the just and complete notion of morality; for this must be understood to comprehend every thing that can either direct or influence our moral behavior, and consequently must consider us in all the relations wherein we stand, not only to ourselves and one another, but, above all, to the great Author of our Being, [on whom we do entirely depend, and to whom we are therefore, in all reason, accountable.] ⁹

19. (II.) The external and moral obligation we are under to those actions and forbearances above-mentioned, ariseth from moral government, or the consideration that they are the will and law of

⁸ Brackets indicate portions not in the first edition. [The Editors.]

⁹ Not in the first edition. [The Editors.]

a superior who aims at our happiness in enjoining them, to whom we are therefore accountable for our behavior, and by whom we shall be awarded or punished; *i. e.* made to feel pleasure or pain, according as we behave well or ill (which are its sanctions:) so that this obligation takes its force from the former, and this is two-fold, political and religious.

20. (1.) The political obligation to the practice of these moral actions and forbearances, is the consideration that they are the public will, or the will and law of the society or government we live under, and to which we are accountable (whether indeed it be a family or a state) enforced by the sanctions of temporal rewards and punishments. In this view moral laws become political laws, and moral good, political good, to which many other laws may be added, for promoting of the public weal.

21. But here again, [tho' God is the founder of government, both economical and political.] ¹⁰ yet while we rest on this foot, and act merely under these political views, and with a regard only to our interest in this world, tho' we may be said to be mere moral men (as that expression is commonly used) or good citizens, and good common-wealthsmen, we cannot be said to be religious, no, not even in those actions that relate to God himself. But,

22. (2.) The religious obligation we are under to those actions and forbearances that are necessary to our happiness in the whole, is the consideration that they are the will and law of God, our Creator, Preserver, and supreme moral Governor, the great Author, Head and Lord of the whole social system, enforced by the sanctions of eternal rewards and punishments, to whom we are justly accountable for all our behavior, and by whom we must expect to be treated well or ill, according as that shall be found to be good or bad.

23. For it will appear hereafter, that they must be the will and law of God concerning us, because He being perfectly happy, and self-sufficient to his own happiness, cannot aim at any advantages to himself, in giving us being, or in any of his dispensations towards us; and consequently, that his great end must be our happiness; and that this he will consider as his interest, his delight and glory, that his rational creatures be in the whole, a happy system, by doing what is fit and right upon all occasions. It being therefore

¹⁰ Not in the first edition. [The Editors.]

his aim that we be happy, whatsoever does in the nature of it, and according to the constitution which he hath made, tend to [his honor and] ¹¹ our true happiness, as being therefore fit and right, must be his will and law concerning us, and consequently our duty, and what is contrary thereto, must be sin.

24. That, therefore, which constitutes the nature of religion, and denominates our actions and behavior religious, and makes religion and morality, in the complete notion of it, coincident, is, that we forbear whatsoever tends to our misery, and do every thing that tends to our happiness in the whole, in obedience to the will of God, and from a sense of duty to Him, and in view of his all-seeing eye, and the account we are to give of ourselves to Him.

25. So that upon the whole it appears, that morality, in the just extent of it, is the same thing with the Religion of Nature, or that religion which is founded in the nature of things; and that it may be defined, the pursuit of our true happiness by thinking, affecting and acting, according to the laws of truth and right reason, under a sense of the duty that we owe to Almighty God, and the account we must expect to give of ourselves to Him.* Since therefore truth and duty are thus necessarily connected, it must be our business in this essay, to search out all the truths that relate both to ourselves, to God, and our fellow creatures, and thence to deduce the several duties that do necessarily result from them.

26. Now these may all be reduced to that grand ancient principle of true wisdom, Know thyself; which must imply, not merely the knowledge of ourselves, singly considered, but also in all the relations wherein we stand; for this is the knowledge of ourselves in the whole. And because we are active as well as intelligent creatures, and our happiness depends on action as well as thinking, it must therefore be understood to mean a practical knowledge. I shall accordingly explain this enquiry under these six following heads, which, in order the better to bring them down into life and action, I choose to express them generally in the first person, or in the manner of a conversation with ourselves; which method may, perhaps, be most useful, in order to teach young people how to reason with themselves upon these great and important subjects to the best advantage.

* *Vide Crousaz's Art of Thinking*, Page 60. Vol. 1

¹¹ Not in the first edition. [The Editors.]

27. Let therefore every one, in order to the right knowledge of himself and his duty and happiness, and that he may the more effectually be engaged in practice, thus seriously reflect and enquire concerning himself. I. What am I? II. How came I to be what I am? III. For what end was I made and have my being? IV. What ought I immediately to do, and be, in order to answer the end of my being? V. Whether I am what I ought to be? If not, VI. What ought I to do, as a means, in order to be and do what I ought, and in order finally to answer the end of my being? The three first of these enquiries will discover the truths; and the three last, the duties, that we are concerned to know and do in order to our true happiness. And the truths are the speculative, and the duties are the practical part of moral philosophy.

PART I

THE SPECULATIVE PART OF MORAL PHILOSOPHY

CHAP. I

Of the Nature of Man, his Excellencies and Imperfections.

§ 1. (I.) It is first necessary that we consider the truths contained in the Speculative part of this science, relating to God and ourselves. And as we take our rise to the knowledge of God and his conduct towards us, from the knowledge of ourselves, and our intercourse one with another; we must therefore begin with this, and in order hereunto, let every one seriously ask himself this question; (1.) What am I? [A question that I doubt few seriously think of, or much concern themselves about, and so live and die great strangers to themselves, however near and dear that self of ours is to us!] ¹² And that he may duly answer this enquiry, let him thus consider and reason with himself.

§ 2. As I am certain from the perceptions and operations of my own mind, that I am, or have a being; so I know that I am not a stock, a stone, or a tree; for they have manifestly no sense or activity: whereas I am conscious that I can see, hear, taste, smell and feel, and enjoy pleasure, and suffer pain, and can spontaneously exert myself, and act and move from place to place, in pursuance of the one, which I love and delight in, and for avoiding of the other, which I hate and dread. All which are much nobler powers and faculties than those inanimate beings are furnished with.

§ 3. Nor yet am I a beast, a horse, a dog, or an ox, etc., for tho' they appear to see, hear, etc. and to feel pleasure and pain as I do, and can move themselves spontaneously from place to place; yet they have but low, groveling sensations, exertions and enjoyments. They appear to have no notion of any thing but the objects of sense, can conceive nothing of duty and sin, and seem capable of no enjoyment of any thing but meat and drink, and the means of

¹² Not in the first edition. [The Editors.]

continuing their species, and defending themselves; and these only are the things to which their exertions and activity tend.

§ 4. With regard to these, they have, indeed, a wonderful sagacity, and what looks like reasoning, design and contrivance, and a social tendency; but these do not seem to be any thing of their own, because they have them originally, and do not acquire them by teaching, trial and industry. This sagacity therefore seems to be what we call an instinct; by which word, nothing else can be meant, but that they are rather passively acted and conducted by some other being; some governing mind on whom they depend, according to certain laws of nature which He hath established, than that they act from any principle of deliberation and design within themselves.

§ 5. These sensations, appetites and exertions, indeed, I find I have in common with them; but then I am conscious of vastly nobler powers and faculties than these. For I find I can reflect and look into my own mind, and consider myself and my own powers and actions, and their objects. I can attend to the light of the pure intellect, and compare one thing with another, and observe their several relations, and abstract and give names. I can judge of true and false, and of right and wrong, and deliberate and weigh things, and reason and infer one thing from another, and reduce them into method and order, according to their various connections and dependences. I can excite imaginations and conceptions of things past or absent, and recollect them in my mind at pleasure, and reject or keep them under my consideration as I please, at least in a good measure, and am at liberty to suspend judging till I have carefully examined them, and to act, or not to act, in consequence of my deliberations, as I think fit. In the impressions of sense indeed, and the perceptions of evidence, I am passive, but in all these I am evidently active, and can choose or refuse, will or nill, act or forbear, from a principle of self-exertion; which are all truly great and noble powers.

§ 6. I can, moreover, in consequence of these abilities, contrive and project ends and means, and reasons of acting, and rules to act by, and foresee much of the events of my conduct. I can give laws, and propose motives to myself or others, and exact an account of myself or them, and give an account to myself or others, whether I or they do, or do not act according to those laws. And I find,

that as I love or hate things according as they are agreeable or disagreeable to me; so I have hopes or fears, joys or griefs, according as I feel, or have in view, pleasures or pains, and am conscious of having done well or ill, and that my own conscience will not fail to justify and applaud, or accuse and condemn me accordingly; and as I feel great joy and satisfaction in having done what I apprehend to be right, so I feel no less shame, horror, and remorse, when I have done what is wrong.

§ 7. From hence I not only know that I have a being, but also that when I am in tolerable circumstances, and do well, I have a great enjoyment of that being; that it is very dear to me, and that I am, above all things, concerned to preserve and continue it, and to make it as comfortable and happy as ever I can; and am therefore desirous to acquire and enjoy all the means and accommodations, the goods of the mind, body or fortune, that are necessary and convenient for that purpose; which I have also a great value for, in proportion to their subserviency to that end, and am very fearful of being deprived, and very apt to be displeased or feel resentment at any one that would deprive me of them, and grateful to any one that does any thing towards furnishing me with them, or securing them to me. [And all these desires and affections of the private kind, are evidently planted in our nature to be subservient to our personal subsistence and well-being.] ¹³

§ 8. And as I can look back and remember what I have been knowing to in my time; so I can imagine a time when I was not, and conceive a notion of a great number of ages and transactions before me, and of an endless succession of ages and transactions to come. And I cannot only conceive that I may, but cannot refrain from being earnestly desirous, in some condition or other, to bear a part in them, and to enjoy myself happily through all imaginable periods of duration: so that though I know there must have been a time when I began to be, yet I am solicitous that I may never cease to be, and to enjoy myself [and cannot avoid having hopes of this, even after death, since this life turns to so little account.] ¹³ All these are so many facts, and I am conscious and intuitively certain of them, if I look carefully within myself. And such are the properties of my soul or spirit, which is properly myself, my reasonable and active nature.

¹³ Not in the first edition. [The Editors.]

§ 9. But besides these things which relate to my soul (myself, or spiritual nature) I find that I have a wonderfully contrived, and admirably useful engine, my body, which I constantly carry about me, and animate throughout (being tied and confined to it by the present laws of my nature) consisting of a vast number and variety of parts and organs, exquisitely framed and fitted to each other, and to all the functions, powers and operations of my soul; my eyes to see, my ears to hear, my tongue to speak, my hands to handle, and my feet to walk, etc. (not to mention a thousand instances of the most wise design and contrivance, in all the inward parts throughout, for all the purposes of the animal economy, which are not immediately subject to my own will and activity.) Upon the Account of which, as well as the above mentioned powers of my soul, I must confess that, however I came to be, I am indeed fearfully and wonderfully made.

§ 10. I also find, upon looking about me, an endless variety of sensible objects; a glorious heaven above me, and a spacious earth beneath me, furnished with a surprising variety of inhabitants, all connected (together with my own body, one of the most curious machines of them all) in a most wonderful manner one with another. So that it is manifest from their dependence and subseriency, that they are contrived and designed to constitute, as in fact they do, one harmonious, beautiful and useful system; one complete and entire whole; in which I find every thing fitted, in the best manner, to my own conveniences and pleasures, both for the comfortable subsistence of my body, and the entertainment and delight of my soul; but so, that it was, at the same time, the manifest design of them to excite, engage, direct and employ my activity, without which I find I cannot comfortably enjoy either myself or them.

§ 11. I can moreover carry my thoughts and imaginations throughout the vast spaces of heaven and earth, and have a mighty curiosity to pry and search out the secrets and laws of nature, and discover and conceive, as much as I can, of the great Author of it, and what sort of behavior and conduct is suitable to my nature, and the relation I stand in to Him and my fellow creatures, as tending to make me and them happy, and as such, must be amiable, and cannot fail of approving itself, not only to my own reason and conscience, but also to Him and all reasonable beings,

whose esteem and good will I am, from a tendency founded in nature itself, very solicitous to obtain. (Introd. 15. 16. 17.)

§ 12. Of which, as I know there are a great number of my own kind, so I cannot reasonably doubt but there are others of various orders above me, which may probably have other and nobler senses than those five narrow inlets that I am acquainted with, and confined to, and far greater and nobler abilities, both of understanding and activity, than I am furnished with. Such I can easily conceive to be possible; and, from the various gradations in perfection of being, in the several tribes below me, it is very probable there may be the like gradations in several tribes of beings above me.

§ 13. As to those of my own species (from which by analogy I may form some notion of them) I find we were evidently made for society, being furnished with the power of speech as well as reason, whereby we are capable of entering into the understanding of each other's minds and sentiments, and of holding mutual intercourse and conversation one with another, and jointly conspiring to promote our common well-being; to which we are naturally led by a principle of benevolence, and social dispositions and affections, founded in the frame and condition of our nature, which not only placeth us in the various relations of husbands and wives, parents and children, and other relatives, but also lays us under a necessity of mutual dependence one upon another, which obligeth us to enter into compacts for our defense and safety, and for maintaining both private right and public order, and promoting the common good of our species, in the several communities to which we belong. [And as I have a quick sense of what is right in others towards me as being what I am, and of my own ease and comfort, so I cannot divest myself of a sense of what must, for the same reason, be right in me towards others, and a sense of tenderness and compassion for those that are in misery, whereby I am strongly prompted to relieve them: and these tendencies and affections of the social kind, are evidently planted in us for promoting our social happiness.] ¹⁴ And finally; as I cannot long enjoy myself in a state of solitude, and have a strong passion for society; so I find, in fact, that my true interest and enjoyment of myself, depends on the general interest and good order of the community, [and this, in addition to those social dispositions, strongly prompts

¹⁴ Not in the first edition. [The Editors.]

me to the love of my country, and to be forward and active in whatever may promote the public weal.] ¹⁵ Such are my abilities and advantages, and such my condition, circumstances and tendencies, and those of the kind to which I stand related.

§ 14. But then, if I consider myself a little further, I find, after all, that at best I am attended with very great limitations and imperfections. I cannot subsist myself a moment in ease or existence, nor add one power or faculty to those I have. And there are certain bounds (small compared with what I can easily imagine) beyond which I cannot at all extend or exert them. My sight and hearing are very scanty; my understanding is but small; my conceptions are very feeble; my memory is very brittle; my attention is very weak; my knowledge is very confused; my will is very irresolute; my power is very infirm, and my activity can extend but to a very small compass.

§ 15. But, which is worse, I find [which is the general complaint of every one more or less] ¹⁵ that we are troubled with some unhappy tendency or other, [which seems to be founded] ¹⁵ in the frame of our nature; some idle, sensual disposition; some importunate appetite, or some untoward passion, which it is very difficult to keep within reasonable bounds, and in indulgence to which, it is much if we have not contracted some ill habit or other, or, at least, been guilty of many grievous miscarriages, for which our reason and consciences have sadly reproached us, and given us very great uneasiness, and sometimes terrible apprehensions and forebodings of vengeance to come, unless we repent and reform. And multitudes, I observe, are miserable slaves to these perverse dispositions and habits. Hence the sad complaints of the prevalence of lust, passion, prejudice, pride, deceit, oppression, etc., much obtaining in the world, corrupting and biassing the minds, perverting the judgments and resolutions of mankind, and leading them into many errors and vices, to the great mischief and confusion of society, as well as the ruin of particular persons.

§ 16. At the same time we find, by sad experience, that we are daily liable to many infirmities and diseases, pains and miseries, losses and disappointments, and perpetual uncertainty, with respect to life and health, and every thing about us, and must expect, in a little time to quit our present state of being, and resign to the

¹⁵ Not in the first edition. [The Editors.]

common fate of a dissolution, which is called death, that king of terrors, who is incessantly making his approaches towards us in one shape or other. Such a strange mixture is human nature! Such a various creature is man! Such his noble abilities and excellencies on the one hand, and such his imperfections and wretchedness on the other.¹⁶

CHAP. II

Of the Author of our Nature,* His Perfections and Operations.

§ 1. (II.) I proceed now to the next enquiry. Let every one then, in the second place, seriously ask himself this question, How came I to be, and to be such an imperfect and sinful being as I am? For we cannot have a right knowledge of ourselves, without considering, not only what we are in ourselves, but also how we stand variously related, and particularly, without looking to the cause of our present being and limitations (Introd. 26.) and in order to answer this question, let us consider and reason with ourselves in the following manner.

* *Quid prius dicam solitis parentis,
Laudibus, qui res hominum ac Deorum,
Qui mare & terras, variisque mundum,
Temperat horis?*

Hor.

¹⁶ The following passage was inserted by Will. Smith in the third edition:

“On this subject the moral and pious Dr. Young, in the first of his Night-Thoughts, has so excellently expressed himself, that I cannot conclude this Chapter without a few lines from him:—

“How poor, how rich, how abject, how august,
How complicate, how wonderful is Man?
How passing Wonder He who made him such?
Who center'd in our Make such strange extremes?
From different Natures marvelously mix'd,
Connection exquisite of distant Worlds!
Distinguished link in Being's endless Chain!
Midway from nothing to the DEITY!
A Beam ethereal sully'd and absorpt!
Tho' sully'd, and dishonor'd, still divine!
Dim Miniature of Greatness absolute!
An Heir to Glory! a frail Child of Dust
Helpless Immortal! Insect infinite!
A Worm! a God! —I tremble at myself,
And in myself am lost! —”

[The Editors.]

§ 2. I know that I have a being, [because I perceive and act, and that I must have had a beginning of existence, because there must have been a time when I did not perceive or act, and I can have no notion of the existence of an intelligent active being, without conscious perception and activity.] ¹⁷ And if I began to be, I must have been made. It is certain I could not come into being by mere chance, for that is nothing but an empty name which we vulgarly use only as a cover to our ignorance or inadvertence. I also know I did not make myself, for that is impossible, and would imply, to be, and not to be, at the same time; nor have I power to continue myself in being so much as one moment; nor can I a moment secure my health or any of my enjoyments (art I. Chap. I. § 14.) so that I find I am wholly a limited and dependent being.

§ 3. It is therefore certain, that I must have had a cause; for an effect, or thing made, without a cause, is a contradiction, and can have no meaning. There must then be some other being on whom I depend. And since there cannot be an effect without a cause, it is evident that the cause of my being must have powers capable of producing such an effect; otherwise there would still be an effect without a cause, than which nothing can be more absurd. It is evident that my parents could not be the adequate causes; they could, at most, be only the occasions or instruments of my being; for it never was in their power that I should be at all, or being, that I should be such as I am; nor could they continue me a moment in being, health or ease. It is therefore plain that I must look higher for an adequate cause, both of my existence and subsistence.

§ 4. It is moreover manifest, that no cause can give what it hath not, or, which is the same thing, produce an effect more noble, or of greater powers or perfections than itself; for then again, there would be an effect without a cause, or something produced by nothing, which is impossible. Hence, therefore, it is plain, that what is destitute of perception, consciousness and intelligence cannot produce a perceptive, conscious, intelligent being. What is void of any principle of deliberation, liberty and activity, cannot produce a considerate, free, active being, etc. It is consequently evident, that the being who brought me into being, must himself

¹⁷ Not in the first edition. [The Editors.]

be possessed of powers or perfections analogous to those I experience in myself.

§ 5. Since, therefore, I know I have some considerable degrees of understanding, knowledge, will, force and activity, with freedom of deliberation, choice and design, and the powers of self-exertion, and self-determination, together with some sense of benevolence, and of right and wrong, or equity and iniquity, and some disposition to do the one, and avoid the other (Chap. I. § 5, 6.), it is from hence evident, that the Almighty Being, who made me, and whom I call God, being the genuine and adequate cause, from whom I derived, and on whom I depend, must Himself have understanding, knowledge, will, force, and activity; must have liberty, choice, deliberation, self-exertion and self-determination; and must be a being of equity, justice and goodness, and all other moral perfections, which are implied in these, and which are comprehended under the terms holiness and rectitude. And as I am thus truly made by Him, and in some measure to resemble Him, He must therefore be strictly and properly my Parent, or the Father of my Spirit.

§ 6. Now what I thus argue from myself to the cause of my existence, must be equally true of every other intelligent active being, that knows he must have had a beginning of existence, and is limited and dependent, however so perfect, as well as of me. From whence it is evident, that this universal cause must be possessed of the highest perfections and powers that are conceivable, or do at all obtain, and that he must hold them entirely independent of any other being whatsoever: and, being independent of any other being, it is evident, that He cannot be under the power of any other being to limit or control Him, and that all other beings must be entirely dependent upon Him, and consequently must have derived from his will and power, and therefore be limited to various degrees of being and perfection, as pleaseth Him. So that He must hold, possess and enjoy all possible perfection in and of Himself, without any possible limitation or imperfection, and must be the universal Father of Spirits, and was accordingly by the wisest of the ancients, styled, The Father of the Universe.* του πατρός εσμεν — χαίρε πατερ, &c. Arat. in St. Paul, Acts xvii. 28.

§ 7. [Since, therefore, he thus exists, independent of all other

* *Vide* Clarke's and Burnet's *Boyle's Lectures*.

beings, and they, by the necessity of their nature, derive from Him, and depend on Him, it is plain that he must exist originally by the absolute necessity of his nature without any cause, and consequently be All in All, all that truly is, all perfection and fulness of being, or being and perfection, by way of eminency, and so He alone must be the necessarily existent being, or that being, to whom it is peculiar that existence is necessarily implied in his very essence. Hence He was, by the wisest of the ancients, called the το ον, and the ὁ ὄντως ὢν, or the Being who truly exists; and hence the name Jehovah, by which He thought fit, from the beginning, to be called, in contradistinction to all precarious and dependent beings, signifies, the essence existing, or the being whose essence implieth existence, and whole existence is ever present, without any limitation to time or place.*] ¹⁸

§ 8. Nor can there be more than one such being, because it is thus evident that He alone can necessarily exist, and that all possible perfections are united in Him, [or One in Him; it being a contradiction, that two or more beings should each have all possible perfection. And since He must thus have such an absolute fulness of being, He is on that account said to be Truth and Good, by way of eminency: He is Truth, as in Him there is all reality, and Good, as in Him there is all excellency, even every thing that can contribute to render both Himself and all His creatures entirely happy; and He is called Truth, as He is intelligible; and Good, as He is eligible. He must therefore be the source of all happiness, both with regard to the intellect, will, affections and activity.] ¹⁸

§ 9. In this method of reasoning it is evident, that the great cause or Author of my being and powers, and those of all other spirits, or intelligent active beings, must necessarily be infinite, eternal and unchangeable. For if He be out of the power of every other being to limit or control Him, his knowledge, power and activity, cannot be confined to any particular object, in any point of space or duration, since all being, time and place, depend on Him, nor can He be liable to any change from any power whatsoever, since all powers derive from Him. So that, as there never was a time when He could have begun to be, so it is impossible he should

* *Vide* Hutchinson's *Moses Sine Principio*.

¹⁸ Not in the first edition. [The Editors.]

ever cease to be, or be altered from what he is. And for the same reason that he cannot but be present here or there, or to every particular person or thing, in any assignable place or point of space, he cannot but be every where else, or omnipresent, since all existence perpetually depends on Him. And hence it is plain, that all things past, present, or to come, in all parts of the universe, must at once be present to Him, as being perfectly known to Him, and subject to Him, as being entirely dependent on his almighty will and power.

[§ 10. Nor can I doubt of the existence of such a necessary and eternal being, from the existence of necessary and eternal truth. There are a great number of evident truths that come within our reach, which I find exist necessarily and eternally independent of my mind, or any other created mind whatsoever, by the light and evidence of many of which (to which I find my mind is passive) I am enabled to judge of true and false, and of right and wrong, in every particular case: such as these, action implies existence; an effect must suppose a cause; the whole is bigger than either of its parts; things equal to another are equal among themselves; what is right or wrong in another towards me, must be equally right or wrong in me towards him, &c. Now, these and the like truths imply the necessary habitudes of certain essences that do not depend on any particular existences in nature, and must therefore have an antecedent mental or intellectual existence; and there can be no conception of truth without a mind perceiving it, or in which it exists. Since, therefore, there are eternal truths necessarily existing, independent of any created mind, or any thing existing in nature, it is evident there must be an eternal, necessarily existing, independent Mind, in which they originally exist, as one eternal Light of Truth, and by whom they are exhibited to all other minds in various measures, according to their several capacities and application, enabling them to judge of every particular thing that comes within their notice.* He is therefore the great Parent Mind, from whom derives all light and knowledge to every created intelligence, being as it were, the intellectual sun enlightening our minds, as the sensible sun, by his incessant activity, enlighteneth our eyes.] ¹⁹

* *Vide* Norris's *Ideal World and Miscellanies*, and Cambray's *Demonstration*, and Cudworth's *Int. Syst.*, p. 735. Ed. 1743, and *Immutable Morality*, p. 250-260.

¹⁹ Not in the first edition. [The Editors.]

§ 11. What I have thus argued from my own existence, powers and faculties, and those of every other intelligent and active creature, and from the existence of eternal truth, may be also demonstrated from the existence of every sensible thing that I see, hear and feel, from without me. I know that I am not the cause of any of those impressions that are made upon my senses; light, colors, sounds, tangible qualities, etc. I am sure they do not depend upon my will and activity; for I am entirely passive in the reception of them. Nor can they be without a cause, nor yet from any senseless, inert or unactive cause, for that is a contradiction in terms. They must therefore be the constant effects of an intelligent cause, intimately present with me, and incessantly active upon me, who continually produceth all these sensations in my mind, correspondent to the archetypes in his all-comprehending intellect, according to certain stable laws, or fixed rules, which He hath established to Himself, and which are commonly called the laws of nature. When therefore I consider the whole system of these sensible, as well as the intelligible, objects that surround me, and under the impression of which I continually live, I must conclude, that I live, and move, and have my being, in Him, who is the perpetual and Almighty Author of them.*

§ 12. I find these sensible objects are all firmly connected together, things visible with things tangible, and all the various combinations of them one with another, so as to constitute one most beautiful and useful whole, which we call the natural world; in all which I do manifestly discern the most wise design, and the most exquisite contrivance and adjustment of ends and means (Chap. I. § 10.) from whence I gather, that they must be the effects of a most wise and designing cause. And I do evidently experience that they are all contrived in the best manner to render them subservient to all the purposes of my subsistence and well-being, and that of the whole rational and moral system, which we call the Moral World; from whence I must conclude the glorious Author of them to be not only an infinitely wise and powerful, but moreover an infinitely kind and benevolent Being.

§ 13. I do not, indeed, find, upon a close examination, that there is any necessary connection between them; for instance, between the objects of sight and feeling; the one appears to have only the

* *Vide* Bishop Berkeley's *Dialogues*, pp. 78, 79, etc.

nature of a sign with regard to the other, being all alike, mere passive perceptions in our minds, between which there can be no relation of causality. So that the connection between them, tho' stable, is entirely arbitrary; as is that between the sound, man, and the thing signified by it: from whence I gather, that I must unavoidably consider the one with regard to the other, to have the nature of a wonderful language,* whereby the great Author of Nature appears to be continually present with me, discovering his mind and will to me (and that in a stable and invariable manner, which I find I can always depend upon) and, as it were, speaking to me, and directing me how to act, and conduct myself in all the affairs of life; whereby he manifestly discovereth a constant watchful providence over me in all my ways. From whence it is evident, not only that He is, but that He must be, both a Being of infinite goodness, wisdom and power, and of the most stable truth, and invariable integrity.

§ 14. I do moreover see and feel a vast variety of motions, on the laws of which, most wisely contrived, dependeth the whole order, harmony and usefulness of the natural world. But it is certain that nothing corporeal can move itself, being, as such, merely passive and inert; and yet it is no less evident, that motion implies force and activity in the mover;† and since nothing can act where it is not, it manifestly follows, that in all the wisely contrived motions of nature, as well as all other objects of sense, both in the heavens above, and in the earth below, we constantly see and feel the universal presence of that most wisely designing, and most powerfully active, all-comprehending Mind, who both begins and continues motion, and is therefore the Almighty Author and Preserver of all things.

[§ 15. I say, we both see and feel his universal presence; for it is manifest, that He may as truly be said to be an object of sense as any human person; for, what do I see when I behold a king: not the spirit or soul, which is properly the person, and which, in the nature of it, cannot be an object of sense; I see only the shape and color of a man, clothed with gorgeous robes. In like manner, I cannot see God, as He is a spirit, and, as such, is invisible; but I as truly see Him, as I see a man like myself; nay, indeed, more man-

* *Vide Minute Philosopher*, Dial. 4.

† *Mens agitat molem*. Virg.

ifestly than I can behold any mortal man; for I see Him in every visible shape and form in all nature; I behold Him in all the infinitely various modifications of light and colors throughout the whole creation; in all which, He is every where present, being, as it were, clothed with light, as with a garment; which expression is rightly observed to be of like import with that saying of the ancient eastern sages, that God hath light for his body, and truth for his soul.* In the same manner, I may truly say, I feel Him in the heat and wind, and in every tangible figure and motion, etc., I hear Him in every sound, and taste Him in every morsel, etc. In a word, I must again say, it is He who is All in All.] ²⁰

* *Vide Minute Philosopher*, Dial. 4. § 5, and 15.

²⁰ Not in the first edition. In the third edition, W. Smith added the following:

“ . . . and that it is only the grossest insensibility and want of attention, that hinders heedless man from seeing Him and feeling Him intimately in all things, and at all times.

“ On this pleasing subject, hear a few of the divine sentiments, delivered in a sublime and philosophical hymn, by a great poet (Thomson), happy in all things, but chiefly in this the most valuable of all, I mean, the leading his readers through nature’s works to nature’s God — that God to whom he tuned his reed, whose inspiring presence he ever felt, and ever strove to make others feel: for the true love of God, and for his sake, the unconfined love of all his creatures, in which he is seen, are inseparably connected.

“ . . . The seasons, as they change,
Are but the varied God. The rolling year
Is full of Him. Forth in the pleasing spring
His beauty walks, his tenderness and love.
Then comes his glory in the summer months,
With light and heat refulgent. Then his Sun
Shoots full perfection through the smiling year;
And oft his voice in dreadful thunder speaks: —
His bounty shines in autumn unconfined,
And spreads a common feast for all that lives.
In winter awful He! with clouds and storms
Around Him thrown, tempest o’er tempest roll’d,
Majestic darkness! on the whirlwind’s wing,
Riding sublime, He bids the world adore. —

“ But wandering oft, with brute unconscious gaze,
Man marks not Him, marks not the mighty hand,
That, ever-busy, wheels the silent spheres;
Works in the secret deep; shoots, steaming thence
The fair profusion that o’erspreads the spring;
Flings from the sun direct the flaming day;

§ 16. Furthermore [not to descend to that infinite world of minute creatures, which the microscope opens to our view, and which gives us surprising apprehensions of the Deity] ²¹ as I observe all these sensible objects about me, are connected together, in a wonderful manner, into one most beautiful and useful system, and made subservient to my subsistence and well-being, and those of my species, in this mansion allotted to us; so I observe this globe, on which we live, to be no less wonderfully connected with the sun and other planets, with us surrounding and depending on him, so that they all make one entire system; the other globes being probably designed for uses analagous to this of ours. And as the prodigious number of fixed stars seem to be of the same nature, so it is probable they are designed for the like purposes with those for which I find our sun, the great source of light and life to us, is manifestly fitted and designed, and consequently may have globes like ours, depending on them. If so, as this gives me a stupendous idea of the vast extent and variety of the mighty works of God, so it must give me astonishing apprehensions of His excellent greatness, majesty and glory, who must be equally present with them all, and does alike display his infinite wisdom, power and goodness in them, to all the admiring beholders; having His whole vast Family of Heaven and Earth, alike depending upon Him, and deriving their all from Him, in all places of His Dominion.

[§ 17. What is thus evident to me from the frame and constitution of the natural world, is no less evident from the constitution of the moral world. For, as I see all the order, harmony and usefulness of nature depends on the laws of (what is called) attraction, by which the vast globes keep their situations, and proceed incessantly in their perpetual rounds, and all the parts and appendages of each globe are firmly kept together; and also on the surprising instincts by which the several tribes of animals are led to provide for their subsistence, and the continuance of their species, which can no

Feeds every creature, hurls the tempest forth;
And, as on earth, this grateful change revolved,
With transport touches all the springs of Life —

“Should fate command me to Earth’s farthest verge,
To distant barbarous climes — ’tis nought to me,
Since GOD is ever PRESENT, ever FELT. —”

[The Editors.]

²¹ Not in the first edition. [The Editors.]

otherwise be accounted for, than from the mere passive impressions of the great Almighty Mind, that subsists and governs the world in the best and wisest manner: so I observe all the order, harmony and happiness of the moral world, depends on the laws of benevolence (Chap. I. § 13.) which taking its rise in the natural affection between the sexes, parents, children, and other relatives, spreads through the whole species, strongly attaching them to social life; which strong tendency of benevolence in the moral world, is plainly analogous to attraction and instincts in the natural, and must accordingly be a like passive impression of the same great Parent-governing Mind, who plainly designs hereby to keep the moral world together, and in order; and by Him also it is manifest, that all created minds are passively enlightened, to have a quick sense, and intuitive evidence of the fit, the fair, and decent in behavior (Introd. 15. And Chap. II. § 10.) and thence, the laws by which this principle of benevolence must be regulated, in order to their universal harmony and happiness. From hence, therefore, also evidently appears, not only His existence, omnipresence, and infinite wisdom and power, but also his infinite benevolence and equity, befitting the character of Him, who is the great Father and Lord of the Universe.] ²²

§ 18. Now it being evident from all that hath been said, that this glorious Being, whom I call my God, must be a being of all possible perfection; it is plain that He must have an entire and absolute sufficiency in and of Himself to His own happiness, and therefore cannot need any of His creatures, or any thing they can do to make Him happy, nor can any thing they can do, make Him otherwise. And from His absolute independency, and their continual and entire dependence upon His will and power (§ 6.) I must conclude, that He is not only the Almighty Creator and most high Possessor of heaven and earth, and of every creature therein; but, moreover, that He is the continual Preserver of all His creatures, and consequently, that the moment He should cease to will the continuance of their existence, they must unavoidably cease, and drop into nothing.

§ 19. Nor can it, I think, be conceived, that the infinitely wise, powerful, just and good Author of my being, and of all other intelligent active creatures, would neglect us, and take no further

²² Not in the first edition. [The Editors.]

care of us. I cannot imagine, from His attributes above demonstrated, but that He must look after each of His creatures, and see what use we make of the being, powers and advantages He hath given us, and take care to instruct and conduct us to the end He designed, and that in a manner suitable to the nature and powers which He hath given us (Chap. I. § 2, 5.) It cannot therefore be, but that, as he evidently governs the natural world, in a passive manner, suitable to its passive nature, by the laws which He hath established to Himself (being Himself, properly speaking, the sole agent) so He must much more govern the moral world (as being in itself of vastly the greatest worth, and the end of the other) in a manner suitable to its rational and moral nature, to whom He hath given to be a system of intelligent, conscious, free agents, and consequently capable of moral government, by laws and motives, suggested to their reason and conscience, and to their hopes and fears. And consequently I cannot doubt but I am subject to His conduct and government, and that he will thus govern me as a reasonable and moral agent; and that, in consequence of this, He will call me to an account, and see how I shall have conducted myself in this state of probation, in the use of the abilities and talents which he hath committed to my trust, and judge whether I have endeavored to answer the end of my being, in conformity to the laws of that reasonable and self-active nature, which he hath given me, and make me fare well or ill, according as my behavior shall be found to have been good or bad. That this is fit and reasonable to be expected, my own conscience strongly suggests (Chap. I. § 11, 15.) and that happiness or misery, will be the effect of virtue or vice, the nature of the things themselves loudly proclaims [(it being a no less evident law of nature in morals, than in naturals, that whatsoever a man soweth, that shall he also reap.*) Nor can it be doubted but that He, who is holiness and righteousness itself, cannot but love those qualities wherever He beholds them, and must therefore be engaged to make them happy; nor can His justice fail to make the contrary miserable. So that as sure as He is just and good, so sure He will reward the one, and punish the other. And what is thus reasonable to think with regard to myself, must be equally true with regard to all other intelligent creatures.]²³ God must there-

* *Vide* Turnbull, Vol. 2.

²³ Not in the first edition. [The Editors.]

fore be, not only the Almighty Creator and Preserver, but also the Supreme Ruler, and moral Governor of the world; the great King, Lord and Judge of the whole universe, which therefore is His Kingdom, in which He most wisely and uncontrollably presides, and orders all things for the good of the whole, in a manner suitable to the best interest of each nature. I cannot therefore doubt but that He will in the whole and result of things, bring good out of evil, and make evil itself subservient to good, and even over-rule the sins and follies of His creatures, so as finally to answer the best ends.

§ 20. If now it be enquired, how I came to be such an imperfect, frail, sinful being, as I am; or how it could be, that the wise and good God that made me, who is Himself the most perfect and best of beings, should make me such an imperfect, sinful and miserable creature, as I find myself to be? (Chap. I. § 15.) To this I must answer in the following manner: that God should make me such an imperfect (or less perfect) creature as I am, compared with others, or with what I can easily imagine, I see no reason to doubt; inasmuch as my being itself, and every perfection of it, and advantage attending it, must be His sovereign free gift, and what He was in no wise obliged to bestow. He is the sovereign Lord of His favors, and must therefore be entirely at liberty to bestow such degrees of being and perfection, and such advantages, greater or less, as He thinks fit; and it appears that He hath delighted in a boundless variety in all His works.

§ 21. Indeed that He should, without any known voluntary fault of mine, put me into a condition that is, in the whole, worse than not to be; or that He should, in giving me my being, lay me under an absolute necessity of being finally sinful and miserable; this would be a very hard case indeed. But this I must think utterly impossible, as being what I cannot think consistent with His wisdom, holiness, justice and goodness, above demonstrated.* But so long as I have such a being as is desirable, tho' attended with great frailties, limitations and imperfections, and am put into such a condition as renders me capable of further improvements, and of attaining to some good degree of happiness, if I am not wanting to myself, and since I shall not be obliged to account for any more than I have received; I cannot reasonably complain, but ought to be very thankful for it, tho' I see others have much greater advan-

* *Vide* Wollast. R. N., p. 200.

tages than I, from whom, in all reason, a proportionably greater account will be expected.

§ 22. And as to my being so sinful a creature as I must confess I am, this I cannot ascribe to God; for since the formal notion of sin consists in the voluntary opposition of our wills to the known will of God, or the constitution which He hath made, it must be the fault of my will, and not of His; and accordingly my own conscience tells me, whenever I do amiss, that I myself (and not He) am the cause, and true author of all the wickedness I commit. If, therefore, instead of being obedient to the Author of my being, and making a good use of my liberty, and of the powers and advantages He hath given me, and thereby further improving them, and qualifying myself for the happiness He designs for me in so doing, I make a bad use of them, by voluntarily acting contrary to His known will, and thereby sink myself into a worse condition; nay, tho' it were into a worse condition than not to be, it is wholly owing to myself, and not to Him that made me.

§ 23. If now I should ask, why hath God made me at all peccable, or capable of sin? This would be the same as to ask, why hath He made me capable of duty; or, why hath He made me a free agent? But this would be a strange question; for without liberty I should be destitute of one of the chief excellencies of my rational nature, and should not be capable of either duty or sin, properly speaking; for as sin consists in a free and voluntary disobedience, so duty consists in a free and willing obedience to the known will of God. So that without a power of liberty or free agency, there could have been no such thing as either virtue or vice, praise or blame; nor can either the one or the other obtain, but in proportion to the knowledge we have, or may have, of what we ought to do, and the powers we are furnished with, either to do or forbear.*

§ 24. And, lastly, as to the many pains, calamities and dissolution, to which I am liable (Chap. I. § 16.) I must think, that as I am a sinner, I need a course of discipline: that it is fit natural evil should attend moral evil, as the best means for the cure of it; and that therefore God, having it in view that we would abuse our liberty, not only justly, but wisely and kindly ordered these calamities, as being the fittest means that could have been used to bring us to repentance and reformation, and to discipline us to virtue,

* *Vide* Wollast. R. N., p. 62.

by mortifying our lusts, and disengaging us from those objects that are most apt to ensnare and mislead us; and, at the same time, they give us occasion and opportunity for the exercise of several virtues of very great use towards the perfecting our reasonable and active nature, which otherwise could have had no place; and since we cannot, as things now are, be completely happy here, they lead us to the hopes of a better state hereafter.

§ 25. Thus it appears to me, that, without any imputation upon either the wisdom, power, justice or goodness of God, we may sufficiently account for all the sin and calamity that obtain in the world. But if, after all, there should be some untoward appearances in the conduct of providence that we cannot clearly account for, they ought not to be admitted as any just objections against what hath been antecedently demonstrated; especially since we should be very vain indeed, to think ourselves qualified to be competent judges of the deep things of God.²⁴ We see but a small part, a very short scene of the vast drama, and therefore are not able to make any tolerable judgment of the whole: so that what to us may have the appearance of evil, may, in the whole, have the nature of good; and it becometh us, for that reason, to have an implicit faith in the infinite wisdom, power, justice and goodness of the Deity, above demonstrated, that it will prove so in the whole and result of things.²⁵ And that this expectation may appear the more reasonable I proceed now to the next enquiry.

²⁴ W. Smith adds in a footnote the following verse:

“For, lives the man, whose universal eye
Has swept at once th’ unbounded scheme of things;
Mark’d their dependence so, and firm accord,
As with unflinching accent to conclude,
That this (or aught he sees) availeth nought?—
’Till then alone let zealous praise ascend,
And hymns of holy wonder to that power,
Whose wisdom shines as lovely on our minds,
As on our smiling eyes his servant-sun.

Thoms. Sum.”

[The Editors.]

²⁵ W. Smith in the third edition concludes as follows:

And, ’till then, according to the advice of the admirable poet just quoted, we should zealously adore Him for those marks of wisdom and goodness which we can see, and even daily feel; always maintaining a cheerful resignation to his holy will, and steadily pressing forward, amid all the changes and chances of this mortal life, toward the mark, for the prize of the high calling of God in Christ Jesus.

CHAP. III

Of the End of our Being, and of our future State.

§ 1. (III.) ²⁶ Let every one then, in the third place, seriously consider further, and enquire with himself, for what end was I thus brought into being, and am thus continually subsisted by Almighty God? And for the resolution of this question, let him thus think and reason with himself, or to this effect:

§ 2. That I was not made, at all adventures, without any contrivance and design, but must have been made for some end or other, I cannot doubt, since I have evidently found, that He who gave me my being, must Himself be a being of all possible perfections, and consequently must be a most kind, wise and designing cause; especially since I do also evidently find in fact, so many and such manifest tokens of the wisest and most benevolent design and contrivance in my whole frame, and in every thing about me. (Chap. I. § 2, 9, 10.)

§ 3. Being therefore made by a most wise and good cause, I must necessarily have been made for some wise and good end. And having demonstrated that the Being who made me, hath an infinite sufficiency within Himself for his own happiness, independent of any other being (Chap. II. § 18,) it is manifest that whatever good end He had in giving me my being, it could not be to serve Himself of me, or to promote any advantage to Himself by me. This were a thought infinitely too mean to entertain of Him, who is God, all-sufficient, that it could be possible for Him to stand in need of me, or of any thing I could do or suffer, in order to his own happiness.

§ 4. Moreover, since it hath been evidently discovered that the author of my being is infinitely perfect, and consequently perfectly just and good: perfectly equitable and benevolent (Chap. II. § 6, 17,) it is evident that He could not give me my being with any malevolent design, or with a design that I should be absolutely and unavoidably miserable in the whole; nor could He (as I humbly conceive) design misery for me, or any of his creatures, but in consequence of their personal voluntary demerit, by persisting

²⁶ W. Smith in the third edition begins as follows:

“Now, that we may be the better grounded in these hopes, namely, — that the whole of things will finally result in general good; I proceed to the third [etc.] . . .” [The Editors.]

in willful rebellion against Him, or the general interest of the constitution which He hath made, for this would be so far from consisting with equity and benevolence, that it would imply the very notion of cruelty. A thought which we should remove at an infinite distance from that most perfect and best of beings!

§ 5. Indeed, in case of willful rebellion, finally persisted in, it is fit and right, and ever necessary for the good of the whole (being the most effectual means to cure rebellion, and secure the obedience of God's creatures, which is necessary for their general good and happiness) that punishment should be inflicted upon those that rebel, and obstinately oppose their wills to the constitution He hath made, and the ends of His government, in proportion to their several crimes and misdemeanors (Chap. II. § 19.) And indeed mischief and misery do, in the nature of things, necessarily result from sin and vice. But it cannot be therefore supposed that their misery could be His primary design, or that He should intend their rebellion, or lay them under a necessity of sinning, that they might be finally miserable; for this would, in effect, be absolutely to design their misery, and delight in it as such, which to Him must be infinitely impossible.

§ 6. On the contrary, since God is evidently a most kind and benevolent Being, and could therefore have no other than kind and benevolent ends, in giving being to His rational creatures, it is plain that His primary intention must have been so far from that of making them to be miserable, that He did undoubtedly make them with a design that they might be, in some good degree, happy, in the participation and enjoyment of His goodness, in proportion to their several capacities and qualifications. [And that this was, in fact, His end, is also manifest from the frame and structure of the nature which He hath given them; for He hath given them consciousness, whereby they are capable of self-enjoyment; intelligence, whereby they are able to consider and judge of what is fit and needful to the enjoyment of themselves; passions, whereby they are prompted to desire and endeavor what contributes to their well-being, and to guard and defend themselves against what may be hurtful to them; and a principle of activity, to procure the one, and avoid the other; and of liberty, whereby they are able to suspend judging and acting, till they can duly balance their passions, and act with advantage. And besides

these powers, which are means to their personal happiness, He hath also inspired them with social affections, which render them capable of social happiness. Having therefore given them the means, it is plain He must have designed the end. (Chap. I. § 5, 7, 13.)²⁷

§ 7. This then being the frame of that nature, which God hath given us, it must plainly be His design that we should seek our happiness, in affecting and acting conformable to it; otherwise, if we act inconsistent with ourselves, and so do a violence to our own nature; in this case, we can neither enjoy ourselves, nor any thing else, and so must be unavoidably miserable. Inasmuch therefore as God hath made us to be intelligent, free, active creatures; and since our happiness must immediately depend upon the right use of these powers, and must consist in the free and vigorous exertion of them, in conformity to the great law of our nature, which is the inward sense of our own reason and consciences; it must accordingly be His design, not only that we should be happy, but that we should be so by means of our own activity, and by our always freely acting reasonably, and consequently that we should cultivate and improve our reason in the best manner we can, under the circumstances in which He hath placed us, in order to make a right judgment how we ought to affect and act, and conduct ourselves to the best advantage for our own happiness.

§ 8. It may, indeed, be truly said, that God made all things for His own glory, if it be rightly understood. But wherein then doth His glory consist? It is plain, it cannot consist in the disorder, confusion and misery, of His creatures; nor can it consist merely in being applauded by them. It is, indeed, fit and right in itself, and for our good, as well as His honor, and therefore He requireth it, that we should daily acknowledge Him to be what He is, our Creator, Preserver and Benefactor; and all that is fit and right, fair and decent, true and good, must, as such, be His glory, as being in itself conformable to His infinitely perfect intellect and will, as well as beautifying to His creatures; and accordingly nothing can be of greater use and advantage to us, than that we live under a deep and habitual sense of this. But it would be a most unworthy thought of Him, to imagine that he made us for the sake of being applauded, or that He requireth even these just acknowledgments for His own sake, as though we, or our services, could be any advantage to Him.

²⁷ Not in the first edition. [The Editors.]

This would be to make Him a most selfish being indeed ; especially if we should imagine that He could aim at applause or glory, at the expense of our unavoidable and endless misery : this would be a most dishonourable and shocking thought.

§ 9. So far from this, that I must conceive it to be the Glory of God to communicate His perfections in various degrees, so far as they are communicable, and to display His goodness to His creatures, and make them happy in the participation of it, in proportion to their several capacities, and this in consequence of their acting in obedience to Him, and in conformity to His law, which is the law of their natures. For since He was pleased to give them their being, it cannot be but that, as the tender Father of His own off-spring, He will account it His interest and glory to see them as happy as may be, consistent with the interest of the whole family (to which it is fit every individual should resign) and take pleasure in every thing that contributes to their happiness, and abhor whatsoever is destructive to it, and inconsistent with it, as His greatest dishonor.

§ 10. For since He that wills the end, must will the means necessary to that end, it is plain that since God wills our happiness in the whole, as our end, and his glory, it must be his will and law concerning us, that we avoid every thing that doth, in the nature of it, tend to make us miserable, and that we do every thing that doth, in the nature of it, tend to make us happy (Introd. 23.) So that the glory of God, and our happiness, with the means necessary to it, and his dishonor, and our misery, with the means which tend to that, must necessarily be coincident, and come in effect to one and the same thing.

§ 11. And since it is evident, from experience, that sin and vice doth, in the nature of it, tend to make us miserable ; being contrary to all that is reasonable and right ; contrary to the attributes and will of God ; contrary to the clear sense of our own minds, and to all the interests of society ; and must therefore do a perpetual violence to our reasonable and social nature ; and consequently be most odious in the sight of God, and all intelligent beings, as being unavoidably attended with horror and confusion, both personal and social : and since, on the other hand, it is no less evident, that a virtuous and dutiful temper and behavior, doth, in the nature of it, tend to our happiness, because it consisteth in doing all that is reasonable and right, all that is agreeable to the attributes and will

of God, to the sense of our own minds, and to all the interests of society, and therefore must necessarily approve itself, as most beautiful and amiable in the sight of God, and all reasonable beings, as being attended with universal harmony, peace and joy, both within and without, with regard both to God and man; it is hence evident, that God's glory must consist in our pursuing our own happiness, by avoiding the one, and doing the other.

§ 12. But now to return: since I am convinced, from the above method of reasoning, that my well-being and happiness must have been God's end in giving me my being, and that it must be a happiness suitable to that nature which He hath given me, in the whole of it; I must be persuaded, that since, besides an animal and sensitive, He hath moreover given me a rational, active and social nature, as my superior and peculiar character (Chap. I. § 5.), it is plain He must have designed me, not merely for a sensual and animal, but chiefly for a rational, active and social happiness.

§ 13. It cannot therefore be supposed an end worthy of God, and agreeable to the nature He hath given me, in the whole of it, that I should have been brought into being, only to eat and drink, and sleep, and enjoy the empty gratifications of the animal life, and that my reason, and other superior powers, should be designed only to be subservient to these inferior pleasures (and in effect only to render me more a beast than I should have been without them) and that after a few days spent in these low, grovelling pursuits and enjoyments, I should then be utterly extinct, cease, and be no more. These short lived animal enjoyments are indeed ends suitable to the nature of a mere beast, and for which he is better qualified than I am. But if these could be supposed all the ends that I was made for, the noble powers of reason, reflection, self-exertion and self-determination, must have been given me in vain; nay, indeed to the worst purposes, as they only serve to make me more exquisitely sensual, and, at the same time, sensible of my wretchedness.

§ 14. At least this is certain, that these noble powers render me capable of a vastly higher end, and nobler happiness, and which cannot attain to its perfection here: for when I consider the wretched circumstances of my condition in this life, it is plain that such a happiness can be but a little while, and but very imperfectly enjoyed, in this present, short, uncertain and uneasy state, amidst so many sins and follies, embarrassments and perplexities, as

I am, at best, unavoidably attended with, while in this body. Since therefore I am evidently made for such an happiness, and that it cannot attain to any tolerable degree of perfection here, I must conclude that my existence shall undoubtedly reach beyond this short and uncertain life, and extend forward to endless ages. Without this conclusion, I cannot see how I shall ever attain to any end worthy of the wisdom and goodness of the God that made me, and suitable to the superior nature and powers which he hath given me, and the superior happiness I am evidently capable of.

§ 15. And that I may live on, notwithstanding what is vulgarly called death, and am of a nature capable of proceeding on to a nobler and more perfect kind of life, I cannot doubt, when I consider the vastly different natures of spirit and body, of which I consist (the one in itself perceptive, conscious and self-active, the other of itself merely senseless, inert and passive) natures so entirely different, that I cannot conceive of any thing common to them, besides bare existence, or of any natural or necessary connection between them: I can conceive of no other than a mere arbitrary connection, depending only on the laws of their union, which, in natures so different, can, I think, be no other than the mere arbitrary will of the Deity, and His perpetual fiat. The soul, therefore, being of a nature entirely different from that of the body, cannot be capable of any corporeal laws and affections, and consequently cannot be liable to any such change or dissolution as bodies are; *i. e.*, being a perceptive, active, simple, unextended, indivisible substance, it must be naturally indiscernible, and consequently incorruptible. I cannot therefore imagine how the dissolution of the body should affect the existence of the soul, any more than the putting off an old garment, to put on a new one, should affect the existence of the body. So that I cannot consider my body as being myself, or, indeed, as being properly any part of myself; my soul or mind, that intelligent active principle, and that only, being properly myself; and my body I can only consider as a machine to which I am at present confined, and an engine or organ which I am obliged to make use of, in my various perceptions and exertions, *ad extra* (Chap. I. § 8, 9).*

§ 16. Inasmuch, therefore, as I am a spirit of an incorruptible nature, and know that I have powers capable of the sublime and

* Συ ει ἡ Ψυχή, το δε Σωμα σου, τα δε εκτος του Σωματος. *Vide*, Hierocles in *Pyth. Car. Au. & Socrat. in Plato de Anima*.

noble pleasures of contemplation and virtue, which yet cannot, in any measure, attain to their perfection here, I must believe, that, if I am not wanting to myself, they shall attain to it hereafter. I can, indeed, with much labor and struggle, make some little proficiency in them in my present state: but when I have done so, and am capable and earnestly desirous of proceeding further, must I cease, and be no more? Can it be thought that the tender Father of my spirit, would, after all my pains, drop me into nothing, and at once frustrate all my hopes and labors? Can there, in this case, any wise and good reasons be conceived for putting an end to by being and my hopes together? On the contrary, would not this seem extremely hard and unreasonable, and consequently utterly inconsistent, and not of a piece, with the conduct of Him, who must be a being perfectly reasonable and equitable.

§ 17. I do moreover find within myself [a fore-boding of something to come after this life, which I cannot get rid of, and] ²⁸ an eager appetite and earnest aspiration after immortality, that I may be capable of an endless enjoyment of those noble and immortal pleasures, which I cannot disengage myself from; [nor can I think any one, capable of serious consideration, can be disengaged from these views, at least till he has contracted so much guilt as to wish he may go out of being, and is so immersed in sensuality, as to have lost sight of them, and be totally disaffected to them, so as to become a mere brute of the worst sort, a kind of rational brute, and so a monster.] ²⁸ Now I do not find any natural appetite, as this evidently is (Chap. I. § 8.) no, not of the meanest kind, nor in the most despicable creature, but that God hath provided a suitable object correspondent to it; can it then be imagined that he would create such a noble appetite in so noble a creature as man, and have provided no object suitable and correspondent to that? It cannot be.

§ 18. This reasoning is abundantly confirmed to be right, when I consider further,* that in my present situation, a long and laborious course of stedfast persisting in the cause of truth and virtue, in spite of the strongest solicitations to the contrary, is in this world many times contemned, disregarded, derided, and even barbarously treated and oppressed, without any redress, and perse-

* See this Argument finished in the best Manner by Mr. Wollaston, in *Rel. N.*, pp. 200, 210.

²⁸ Not in the first edition. [The Editors.]

cuted even to death itself, and sometimes to the most barbarous deaths; and that as long a course of unrestrained indulgence to the vilest and most mischievous vices, is frequently attended with uninterrupted prosperity to the very last; I cannot therefore doubt, from the wisdom, power, holiness, justice and goodness of God, but that the time must come, when He will bring good out of all this evil, and these crooked things shall be made straight; and that He who cannot but love virtue, as being His own likeness, will reward it, and make it, in the whole, eventually happy, even above and beyond its natural tendency. And that He who cannot but hate vice, as being contrary to His nature, will eventually punish it with due severity, and make it very miserable; which indeed it cannot but be in the nature of the thing itself. (Chap. II. § 19.)

§ 19. The chief difficulty that lies in the way of this persuasion of a future state, is the inconceivableness of it. But this, I think, can be no reasonable objection against it: for who, that had never seen anything but the universal desolation and death of a severe winter, could conceive any thing of the exquisite beauties and admirable productions of a fine spring and summer? Indeed I can no more conceive how my soul is now united to my body, and perceives and acts by means of it, and by a mere thought can move its unwieldy limbs at pleasure, than I can conceive how it can exist, perceive and act, after what we call death, without this gross tangible machine, to which it is at present confined. I can, however, a little assist my imagination in forming some glimmering notion of that future state, from this easy supposition of a man born blind and deaf, who, at the same time, hath the senses of feeling, tasting and smelling.* Now, to this man, the tangible world, with the various objects of taste and smell, is all the world that he can have any notion of, any more than I can conceive of those things which eye hath not seen, nor ear heard, nor have they entered into the heart of man to conceive. I, who have the visible world about me, and the perception of various sounds, am to this man, what I may suppose angels and other spirits are to me: he can no more conceive of the visible world that I converse with, than I can conceive of the spiritual world, or the future state of my being. Now, let me only conceive this man to be deprived of the senses of feeling, tasting and smelling, and he is dead, entirely dead, to all the world that he had

* *Guardian*, No. 27.

ever any notion of. But then imagine his eyes and ears to be opened, and to have this glorious show of visible objects, light and colors, with all their various modifications, set before him, with a no less wonderful variety of harmonious sounds; I must conceive him to have entirely a new world open upon him, to which he was before an utter stranger. He is indeed dead to the dark tangible world, but he hath exchanged it for a new visible world. Such a change is very conceivable; but it cannot be imagined that what we call death can be a greater; nor can I believe it will be so great a change, it being highly probable that seeing, hearing, and some necessary instances of feeling, are common to both our present and future state, and a fund to begin with (together with our intellectual and moral accomplishments) when we enter upon that new condition, wherein I can conceive that other and more exquisite senses may be added to these, and not only these senses, but also, our understandings, memory and activity, may be advanced to a much greater perfection than they had before. And inasmuch as our happiness must imply society and intercourse with each other, and with the external world about us, it cannot be imagined but that we shall go off, and be always attended and connected with fine sensible vehicles,* as means to render us sensible to each other, and capable of mutual communication, and of intercourse with the sensible world around us, wherein the Deity so gloriously displays his infinite perfections.

§ 20. Furthermore, to add another resemblance: I see here a multitude of despicable worms, confined to a slow motion, and to a few low grovelling sensations and enjoyments, which, after a short period of seeming death, by a wonderful transformation, turn into beautiful winged animals, and waft themselves at pleasure through the air, and enjoy pleasures they were before incapable of. Now may it not be reasonably thought, that these creatures were designed to be emblems of my own case? I am here, like them, confined to a little compass of ground, and a few slow motions, feeble exertions, and low, and comparatively mean enjoyments.† But if I shall have acted my part well, in proportion to what powers and advantages I now enjoy, may I not reasonably hope, after my seeming death, to pass into a new and glorious state, compared with

* *Vide* Wollaston, *R. N.*, p. 197, and *Hierocles*, etc., and Bishop Berkeley's *Siris*, § 171.

† For other Analogies, see Bishop Butler.

which, my present enjoyments are, in a manner, contemptible, and my present life little better than a dream? May I not hope, that when I am freed from this gross unwieldy body, and from my present limitations and confinements, and from all my diseases, sins and temptations, to have my powers greatly enlarged, and to be furnished with a pure ætherial vehicle; and in that capacity to shift the scene at pleasure, and traverse through the vast fields of ether,* and in company with † other pure spirits, enjoy pleasures inexpressible, in the contemplation of God, and all His wondrous works of nature, providence and grace, entirely devoted to the obedience of His most righteous and reasonable laws, and unspeakably happy in His image and favor.

§ 21. Upon the whole, therefore, as I cannot conceive how the true end of my being, especially of that superior nature, which is the peculiar character of our species, can be answered merely by living this wretched, short and uncertain life, that is allotted to me here; so I must be persuaded, that I am designed for some other and nobler condition of being hereafter, and cannot avoid having hopes full of immortality. So that the only consistent notion I can frame of this life must be this, that as it is the first stage of my being, so it is designed only for a state of childhood, discipline and probation, in order to another, and a better state, hereafter, which, in the result, is to be a state of perfect manhood and retribution. And consequently, that in order to qualify myself for that happy condition, it must be my greatest care, and the most important business of my life, while I continue here, to acquire, and improve myself in, all those accomplishments, both of knowledge and virtue, and that both personal and social, wherein the perfection and happiness of my superior rational and immortal nature consists; which alone I can carry with me into that future state; and which alone can enable me to enjoy myself, and my friends, and, above all, my God, who is my supreme and sovereign Good, in whose favor, with these accomplishments, I cannot fail of being, in some good degree, happy even here, and finally secure from all evil, and in the enjoyment of a vast, an unspeakable, and an endless felicity! Thus it appears, that the true and ultimate end of my being, can be nothing short of this; that I may be as

**Parte tamen meliore mei super alta perennis Astra ferar.* Ovid.

† *Vide Tull. de Senect.*

happy as my condition will admit of here, and eternally and completely happy in the future state of my existence, in the enjoyment of God, and all that is good, and in the perfection of knowledge and virtue, which alone can render me capable thereof.

PART II

THE *PRACTICAL* PART OF MORAL PHILOSOPHY

CHAP. I

Of the Duties in general, resulting from the foregoing Truths.

§ 1. (II.) Having thus considered the nature of my being, and of that glorious cause, from whom I derive, and on whom I depend, and observed, from the structure of my nature, and His attributes, what I must suppose to have been the great end of that being and nature which He hath given me; I proceed now, from the truths I have found in the first or speculative part of this essay, to deduce the duties that result from them, which constitute the second or practical part of it.

§ 2. And, in general, from the nature and end of my being, which I have considered, I must conclude, that it is my duty, in faithfulness to myself, *i. e.*, to that nature and those powers which are given me, as being a reasonable, active and immortal creature, and in faithfulness to that glorious Being, who is the Author and Preserver of them, to be freely engaged and active myself, in endeavoring to answer His end in the bestowment of them, which from the nature of my own activity (Part I. Chap. I. § 10. And Chap. III. § 7.) And since I am accountable to Him, for all the powers and talents He hath bestowed upon me, and must expect He will call me to account for them, and see what regard I have had to His end, in the bestowment of them; it is necessary that I be, above all things, concerned to act and conduct myself in such a manner, as to be able to give a good account of myself to Him. (Part I. Chap. II. § 19.) And in order thereunto, I proceed to the

§ 3. (iv.) Fourth enquiry, and ask myself further, what I ought to be? Or, which is the same thing, what I ought to do, in order to answer the end of my being? Or, what are the necessary means which do, in the nature of things, directly tend to the accomplishment of it? And for the resolution of this enquiry, it will be needful to consider a little more particularly the end itself, which

is God's end, and, for the same reason, must be mine; for, from the nature of the end, we may, in some good measure, discover what are those means, whether more immediate or remote, that do naturally tend to the attainment of it.* To this purpose therefore, I must reason in the following manner.

§ 4. The great end of my being, is, that my rational and immortal nature may be completely and endlessly happy. The happiness of my rational nature consists in that pleasure and satisfaction that naturally attends its being conscious to itself of its union with its proper objects. The proper object of the intellect is truth, and that of the will and affections is good (Introd. 5. And Part I. Chap. I. § 5, 6.), so that the highest happiness of our nature must consist in that pleasure that attends our knowledge of truth, and our choosing and delighting in good; and consequently the pursuit of these must, in general, be the great duty of my life.

§ 5. God is truth and good itself, and the great source of all that truth and good that is every where to be found in all His works. (Part I. Chap. II. § 6, 7, 8, 10.) Therefore God Himself, with all the truth and good that is contained or implied in Him, and derived from Him, so far forth as I can attain to the practical knowledge of it, must necessarily be the proper object of my rational and active powers, or the powers of my reasonable and immortal nature; and consequently He must be my chief good, objectively considered. And accordingly, in correspondence to the object, my duty and happiness (which is my chief good formally considered) must consist in knowing, choosing, loving, and acquiescing in Him, and in resembling or being like Him, as far as ever I am able: in a word, in the contemplation and love of Him, and all that truth and good which flows from Him; and in forming the temper of my heart, and the conduct of my life, conformable thereunto. And this being my true perfection and happiness, must most certainly be His will and law, who wills my happiness as His end in giving me my being, and in all His dispensations towards me. (Part I. Chap III. § 6, 7, 10.)

§ 6. From hence it followeth, that my duty and happiness must, in general, consist in the union of my will with His; in sincerely choosing what He chooseth, and delighting in whatsoever He de-

* *Quoties quid fugiendum sit, aut quid petendum voles scire, ad summum bonum & propositum totius vitæ respice.* Sen. Ep. 71.

lights in; in submitting to whatever instructions He shall think fit to give, or whatever laws He shall think fit to enjoin, either by nature or revelation; and in resigning to the whole system or constitution which He hath established, both natural and moral: and consequently, in patiently bearing whatever He is pleased to allot, and in conducting towards every person and thing, as being what it really is, and what He hath made it, as He Himself doth, and in governing myself in my whole temper and behavior, by all those rules which promote the general weal of the whole system, as God doth Himself; always avoiding what is wrong or hurtful, as being contrary thereunto; and doing what is right or beneficial, as being agreeable to it, on all occasions as they offer. And all this I must do with a hearty well-meaning, in a designed compliance with His will, and from a sense of duty and gratitude to Him, as the great Creator and Governor of the world, and the Father and Friend of mankind (Part I. Chap II. § 19.) and steadfastly persevere in such a conduct, in spite of all temptations to the contrary. (Introd. 6.) This is what is implied in the general duties of sincerity and integrity.

§ 7. I must, therefore, in order hereunto, duly exercise my understanding, in acquainting myself with the whole constitution of things, and in making from thence a just estimate among the several kinds and degrees of good and evil; and always prefer a greater good before a less, and a lesser evil before a greater. And, because the soul is by far more excellent than the body; the interest of the whole community much greater than that of any one individual; and eternity of vastly more importance than time; I must, therefore, willingly suffer bodily evils, to avoid spiritual; private, to prevent public; and temporal, in order to secure against those that are eternal. And I must resign the goods of the body, or the animal nature, to those of the soul; private goods, to those of the public; and the goods of time, to those of eternity. (Introd. 10.)

[§ 8. The Divine Law, which is immutable truth, is, in itself, the rule or standard, conformable to which we are to form our judgments, and to choose and act with regard to these several goods. But the immediate rule as to us, can be no other than the inward sense of our own reason and conscience duly informed, which is that judgment we make of our tempers and actions, according to what sense or apprehension we have of right and wrong, or what we take to be conformable or contrary to that law. And this

judgment must antecedently determine what we ought to do and avoid, and will consequently give sentence, whether we have done well or ill. (Intro. 15, 22. And Part I. Chap. I. § 6.) Hence ariseth the distinction of our actions, into such as are either materially or formally good or evil. If our actions are such as are really agreeable to the rule, and productive of happiness, they are said to be materially good, even tho' we have no sense of duty, or good intention in what we do. But in order that an action be formally good, it is necessary, not only that it be conformable to the rule, but that it be done from a sense of duty, and with an intention to do what is right and well pleasing to God; evil the contrary. It is therefore a matter of the highest importance, that I faithfully endeavor to inform my conscience, what it is my duty to do and avoid, as being agreeable or contrary to the divine law; that in doubtful cases, I suspend acting till I have used all the means in my power, and duly endeavored to inform myself; and that having so done, I do religiously and steadfastly endeavor to act up to the dictates of my own conscience thus informed, and this from a sense of duty to that God on whom I depend, and to whom I am accountable. (Part I. Chap. II. § 19.) If after all my best care, in the circumstances in which He has placed me, I have made a mistake, I may hope in His goodness, that He will excuse me, and accept of my sincerity; but this I can in no wise expect, if my mistake was occasioned either by supine negligence, or any criminal passion.

§ 9. And that my conscience may be thoroughly and universally informed in all the branches of my duty;] ²⁹ and in as much as my happiness depends on my conducting right in the whole, as I stand variously situated and related, I must descend to particulars, and duly consider myself in all the relations wherein I stand, that I may affect and behave myself suitably to them, and so be happy in each of them. And they may all be reduced to these three general heads, *viz.*, to myself, my God, and my neighbor; correspondent to which are the general duties of temperance, piety and benevolence. Particularly, I. My first relation is to myself, which obligeth me, in faithfulness to myself, to behave suitably to that rational, active and immortal nature, which God hath given me, that I may be happy in that; and this is called Human Virtue,* or virtue due

* *Vide* Dr. Scott, Part I.

²⁹ Not in the first edition. [The Editors.]

to that human nature whereof I consist, [and may be expressed by the general term, temperance.] ³⁰ II. My second relation is to God, my Maker, Preserver and Governor, which obligeth me, in faithfulness to Him, as well as to myself, to behave myself suitably to the character of such a glorious Being as He is on whom I depend, that I may be happy in Him: and this is Divine Virtue, or virtue due to the Deity [and may be expressed by the general term, piety.] ³⁰ III. My third relation is to my fellow creatures, and especially those of my own species, of the same rational, social and immortal nature with myself, which obligeth me, both in faithfulness to myself and others, to behave suitably to the social character, or in such a manner as is fit, decent and right, towards such a system of beings as they are, that I may be happy in them, and they in me; and this is called Social Virtue, or virtue due to society [and may be expressed by the general term, benevolence. So that every branch of virtue is, in effect, an instance of justice or righteousness, which implieth, in the general notion of it, rendering what is due, or treating every person and thing as being what it really is.] ³⁰

§ 10. These relations, and the duties correspondent to them, are said to be, in the general nature of them, of eternal and immutable obligation; because if I or other creatures had never existed, or should be no more, and so the fact should cease; yet it is, and always was, and ever will be, impossible to conceive of such a being as I am, and so situated, to myself, my Maker, and my fellow creatures, but that these obligations will immutably take hold of me; it being necessarily implied in the very notion of such a creature in such a situation, that he should be obliged to such a conduct. (Introd. 11.) And as the general notion of sincerity or probity implieth the performance of these duties, as well in the inward temper and disposition of our hearts, as in the outward actions or behavior of our lives, I must accordingly consider it as my first care, to lay a good foundation within, and to aim at nothing but the truth and right of the case upon all occasions, in opposition to all hypocrisy, since, in the right performance of these duties, consists the highest perfection and happiness of my rational, social and immortal nature. (Part. I. Chap III. § 11. 12.)

³⁰ Not in the first edition. [The Editors.]

CHAP. II

Of the Duties which we owe to ourselves.

§ 1. (I.) It is therefore necessary, in order to answer the end of my being, by being what I ought to be, that I first begin at home, and consider seriously what the duties are that I owe to myself, which are called Human Virtues, [and may be comprehended under the general term, temperance, or a right government of all my powers, appetites and passions.] ³¹ being due to that human, active and immortal nature, which God hath given me, as being necessary to its happiness within itself. And I the rather begin with these, as being necessary in order to both the other branches. And,

§ 2. (1.) From what hath been said, it is plain, that the first duty incumbent upon me, as a reasonable active creature, in order to answer the end of my being, is, to cultivate and improve the reason and understanding which God hath given me, to be the governing principle and great law of my nature (Part I. Chap. III. § 7.), to search and know the truth, and find out wherein my true happiness consists, and the means necessary to it, and from thence the measures of right and wrong, and to discipline and regulate my will, affections, appetites and passions, according to reason and truth, that I may freely and readily embrace the one, and reject the other, in order that I may be truly happy. This general virtue is called moral wisdom or prudence, and stands in opposition to indiscretion and incogitancy. And, to descend to particulars,

§ 3. (2.) Because pride consisteth in a miserable delusion, in thinking of things otherwise than as being what they really are, and particularly in having too great an opinion of ourselves, which is a temper utterly destructive of all improvement and proficiency either in knowledge or virtue, and odious in the sight both of God and man; and since I am nothing of myself, and am entirely dependent on God for all that I am, and have, and hope for; and am at the same time conscious of so many sins and infirmities, and other humbling considerations, with respect both to my body and mind, and every thing about me (Part I. Chap. I. § 14, 15, 16.), it is in the next place incumbent upon me, to consider seriously and know myself, and not to think of myself more highly than I ought to think, but to think soberly, according to

³¹ Not in the first edition. [The Editors.]

what I really am. And this virtue is called humility, [which is the true foundation of all others, as it makes us very cautious of our own conduct, and lays us prostrate before the Deity, and disposeth us to treat others with great temper, tenderness and affability;] ³² and stands in opposition to every degree of pride, arrogance, and self-sufficiency. And,

§ 4 (3.) As our reason and consideration is manifestly given us to make a just estimate of things, and to preside over our inferior powers, and to proportion our several appetites and passions, to the real nature, and intrinsic value of their respective objects (Part I. Chap. III. § 7.) so as not to love or hate, hope or fear, joy or grieve, be pleased or displeased at any thing, beyond the real importance of it to our happiness or misery, in the whole of our nature and duration; it must therefore be my duty to keep a due balance among them, to keep them within their proper bounds, and to take care that they do not exceed or fall short of the real nature and measure of their several objects; and especially so as not to suffer them to tempt or hurry me on to trespass upon any of the duties that I owe either to God or man. This is the office of that virtue which is called moderation or equanimity, and stands in opposition to all ungoverned lusts and passions. More particularly,

§ 5. (4.) Because animal appetites, and fleshly lusts (I mean the appetites to meat and drink, and other carnal pleasures, and whatsoever else is of the concupiscible kind) do war against the soul, and an immoderate indulgence to them doth sensualize and enervate, and, by consequence, miserably debase and weaken its superior and noble powers, and alienate them from their proper objects, and at the same time extremely hurt the temperature and health of the body [and may be very mischievous to others as well as myself, and utterly disqualify me for the service, enjoyment and favor of God (Part I. Chap. I. § 15.) ³² it must therefore be my duty to maintain a perpetual war with them, to curb and restrain them, to keep them under, and bring them into subjection, and regulate them by the ends designed by God and Nature, in planting them in us; which is the office of the virtues called temperance (strictly so called) or sobriety and chastity, which stand in opposition to all intemperance and debauchery. And,

§ 6. (5.) Whereas the turbulent passions of anger, grief and

³² Not in the first edition. [The Editors.]

fear (*i. e.*, displeasure and uneasiness at what we already feel or imagine, and anxious apprehensions of what may seem impending, or whatever else is of the irascible kind) are apt to warp and bias our minds, and disable us for a right judgment and conduct; to destroy the peace and tranquility of our minds, and create a wretched tumult within our own breasts, and frequently prompt us to injurious words and actions on the one hand, or mean compliances on the other (*Ibid.*) it must therefore be my duty to keep them also, as far as may be, under the due government of my reason, and not to suffer them much to ruffle and discompose me, much less to tyrannize over me, or any ways disable me for any duty I owe either to God or man, or tempt me to any thing injurious to others, or mischievous to society: which is the office of those virtues that are called meekness, patience and fortitude, which stand in opposition to wrath, hatred, impatience and pusillanimity.

§ 7. (6.) Forasmuch as I am placed by God in the station I am in, whatever it be, and He expects I should faithfully discharge the duties of it, in proportion to the powers and abilities He hath given me; and hath made my own diligence and activity in the use of them, the natural means of my well-being and usefulness, exclusive of immoderate cares and desires (Part I. Chap. I. § 10. and Chap. II. § 19, 20.), it must therefore be my duty to resign to His dispositions, and to acquiesce in His allotments, to keep my station, and rest satisfied with the condition in which He hath placed me, and contentedly and cheerfully discharge the duties of it; and be active and industrious in the use of the powers and talents He hath furnished me with; [both for my own advantage, and the good of others; for the benefit of the public as well as myself;] ³³ for my comfortable subsistence in this life, and my everlasting happiness in the life to come; all which are the business of those virtues which are called contentment, frugality and industry, in opposition to discontent, envy, avarice, ambition and idleness.

§ 8. (7.) And lastly: inasmuch as I am to continue in my present state but for a short and uncertain time, and am surrounded with many troubles and difficulties, and am placed in a state of probation here, for an eternal state of retribution hereafter; and

³³ Not in the first edition. [The Editors.]

since that future state of my existence is, consequently, of the vastest importance to me, and will be more or less happy or miserable, according as I behave myself while I continue here (Part I. Chap. II. § 19. and Chap. III. § 21.), it must therefore be the most important duty of my life, while I continue in this present condition, to be, in a good measure, disengaged from this world, and from my body and time, and to provide in the best manner I can, for the endless state which is before me; and, in order hereunto, to be daily improving my soul in knowledge and virtue (especially the following virtues, both divine and social) and to be disciplining and training up myself in all those accomplishments and qualifications, which alone can be of any use to me when I am called off this present stage, and which will prepare me to be inconceivably and everlastingly happy in the life to come. This duty is called, the care of the soul, in opposition to the excessive love of the world, and the body. And thus much for the duties we owe to ourselves.

CHAP. III

Of the Duties we owe to God.

§ 1. (II.) I proceed now, in the second place, to the consideration of the relation we stand in to Almighty God. In pursuance of which, it is necessary that I seriously consider what is due to the character of such a glorious Being, as resulting from that relation I stand in to Him, in order that I may be happy in Him; or what those duties are which I owe to that all-wise, almighty and most just and benevolent being, from whom I derive, and on whom I depend; which are called the divine virtues, [and are comprehended under the general name piety;] ³⁴ without the faithful performance of which, I shall rob Him of His just due, in not conducting towards Him, as being what He is, [and at the same time rob myself of the greatest happiness, as He is my chief good.] ³⁴ And,

§ 2. (1.) Inasmuch as God is a Being of all possible perfection and excellency, the great creator, preserver and governor of the world, on whom I do entirely depend for my being, and all my enjoyments here, and all my hopes to all eternity, and to whom I am accountable for all that I think, speak and do (Part I. Chap. II. § 19.), it is therefore my indispensable duty in general, to own

³⁴ Not in the first edition. [The Editors.]

and acknowledge Him, and to live under a deep, serious and habitual sense of Him as such, and to believe in Him, and faithfully endeavor to obey and please Him in all my behavior. This duty is called the knowledge or acknowledgment of God, and faith or faithfulness to Him; and stands in opposition to the ignorance of Him, atheism and unbelief, and to a neglect of Him and disregard to His authority and government. And,

[§ 3. (2.) Because God is a being of infinite perfection and excellency, and therefore infinitely amiable in Himself, and is also the great parent mind, and universal father of spirits, and the source of all beauty, order and happiness, and is accordingly, as a tender parent, unspeakably kind and benevolent to me, and to all the world, and continually doing good, and providing every thing needful for my subsistence and well-being; and by what He is, and has done for me hitherto, hath given me all the reason imaginable, to believe, that if I faithfully endeavor to resemble and please Him, He will not fail to make me for ever as happy as my capacity will admit of (*Ibid.* And Chap. III. § 16, 17, 20.), it must therefore be my duty to love and delight in Him, as my chief good, gratefully to acknowledge His bounty and beneficence, to prefer Him and His service before all things, and to be wholly devoted to Him, both in the sincere intentions of my heart, and the whole conduct of my life. This duty is called love and gratitude to God, in opposition to all ingratitude and hatred or aversion to Him and His service. And,]³⁵

§ 4. (3.) Since God is infinitely sufficient to all the purposes of my happiness; has infinite wisdom to direct Him, power to enable Him, and goodness to incline Him to assist me, in the discharge of all my duties, to support me under all difficulties, to keep me from whatsoever may hinder or interrupt my well-being, and to secure to me every thing that is requisite to my happiness (*Ibid.*), it must therefore be my duty to confide in Him entirely, in the way of well-doing, with a secure acquiescence in His all-wise and all-powerful goodness, which, in one word, is His all-sufficiency. This duty is called trust, or confidence in God, in opposition to all distrust and diffidence. And,

§ 5. (4.) Forasmuch as God is thus infinitely benevolent, wise and powerful, and cannot but know what is best for me, infinitely

³⁵ Not in the first edition. [The Editors.]

better than I do myself, and cannot be misled or controlled in any dispositions He is pleased to make concerning me, and will not fail to bring good out of evil, and to make evil subservient to good, and to bring about the best ends by the fittest means; nor can He fail to consult the best good in the whole, in all His commands and dispensations, in every thing He requireth me to do or suffer (*Ibid.* and Chap. II. § 24, 25.) it must therefore be my duty to be entirely resigned to Him, to submit to His orders and allotments, and to have my will always, as far as possible, united with His. This is the duty of submission and resignation to God, in opposition to all murmuring, untowardness and rebellion. And,

§ 6. (5.) Because God is the incomprehensibly great and tremendous moral Governor of the world; as there is nothing that I may not hope for from His goodness, that is really subservient to my best good, if I faithfully endeavor to obey and please Him; so, on the other hand, from His displeasure and justice, I cannot but expect the severest punishments, if I live in opposition to His will, who is constantly present with me, and sees all the tempers of my heart, and actions of my life, and will, in a little time, call me to account for them. (Part I. Chap. II. § 19.) It must therefore be my duty always to stand in awe of Him, and to think and speak of Him in the most reverend manner; to set Him ever before me, as a witness and spectator of all my behavior, and to be above all things concerned not to displease Him, and solicitously careful, to approve myself to Him in all that I do. This duty is called reverence, or the fear of God, in opposition to all irreverence and disregards toward Him. And,

§ 7. (6.) Since God is Himself infinitely holy, true, just and good, and consequently the great pattern and standard of all moral perfection, and since it is evident, from the intelligent, free, active nature, that He hath given me, that I am capable of some good degree of resemblance or likeness to Him, and since by how much the more I resemble Him, by so much the more perfect and happy I shall certainly be (Part I. Chap. II. § 5.) I must therefore think it my duty to be as like Him as ever I can, in all my tempers and deportment; holy as He is holy, righteous as He is righteous, true and faithful, kind and merciful as He is. Thus duty is called the imitation of God, in opposition to unholiness, or being unlike to Him.

§ 8. (7.) And lastly, since God is that Being from whom we receive all that we enjoy, and on whom we depend for all that we want both for time and eternity (Part I. Chap II. § 6. and Chap. III. § 16.) and since it is fit and right in itself that we own him to be what he is, and of great advantage to us that we live under a deep and habitual sense of this our dependence upon him, and our obligations to him; and that gratitude requireth our just acknowledgments; it must therefore be our bounden duty, to all these good purposes, and for the improving in us every kind of virtue, that we do, every day that we live, most gratefully praise him for every thing we receive, and pray to him for all that we want; and we live a most unnatural and brutish life, if we neglect so to do. And because we cannot do this with any meaning, without that love, trust, resignation, reverence and imitation, which I have demonstrated to be our duties towards him; therefore these tempers and disposition must ever be supposed to attend all our prayers and praises, which are comprehended under the general name of devotion, or the worship of God, in opposition to all profaneness, irreligion, superstition and idolatry.

§ 9. And inasmuch as mankind do thus depend upon God, and receive innumerable favors from Him, not only in their single, but also in their social capacity; and as there is a peculiar fitness in it, as we are all children of the same common Parent, the great Father of Spirits, that we should, not only severally, but jointly, as brethren, pay our common homage, and testify our grateful sense of our common dependence and obligations; and as our joint performance of this duty does open honor to Him in the world, and hath, at the same time, a natural tendency, the more ardently to affect our hearts with devotion to Him, as well as to unite us the more strongly in mutual benevolence one towards another: it is therefore fit, right, and our bounden duty, to worship God, not only severally, but also jointly, in our families, and in public communities, upon such stated seasons, and in such forms, gestures and other circumstances, as are generally agreed upon to be most expressive of reverence, duty and devotion to him. This is the great duty of public worship; to the honorable support of which, we ought, therefore, both for God's sake and our own, jointly and liberally to contribute. And thus much for our duty towards God.

CHAP. IV

Of the Duties which we owe to our Fellow Creatures, or to those of our own Species and Society in general, and to our
 Relatives in particular.

§ 1. (III.) I proceed now, in the third place, to the consideration of the relation we stand in one to another. In pursuance of which, it is necessary that I seriously consider what is due to the social character as resulting from that relation; or what those duties are which I owe to my fellow creatures, especially those of my own species, which are called social virtues, and are comprehended under the general term, benevolence, of which they are so many branches; and they consist in general, in treating or behaving towards them as being what they and I are, that I may be happy in them, and they in me. And as to these,

§ 2. (1.) Since, as I have above observed, being furnished with reason and speech, and social affections, we are evidently made for society (Part I. Chap. I. §. 13.) and since we are placed, by the condition of our nature, not only in a state of dependence on Almighty God, our common Heavenly Parent, but also in a state of mutual dependence on each other for our well-being and happiness (for that in many cases we cannot well subsist without each other's help, and by the good or ill use of our powers, we are capable of being either very useful, or very mischievous to each other) and since, by the powers of reflection and reasoning, we are enabled to place ourselves in each other's stead, and to make a judgment from what we feel in ourselves, how we should wish to be used by others, and to discover what is best in the whole, for our common safety and mutual advantage (Intro. 17.), it is from these considerations manifest, that, in general, it must be our duty to consider ourselves as such, and so situated and related, as in fact we are, and to cultivate a hearty good will one towards another as brethren; [to do nothing hurtful, and all that is beneficial to each other, as far as we may or can,] ³⁶ and to enter into combinations and compacts for promoting our common interest and safety; to resign every one his own private advantage to that of the community, in which his own is best secured, and to make the common good the standard by which to judge of his own duty and interest, and be inflexibly governed by it. Such, in general, is the disposition

³⁶ Not in the first edition. [The Editors.]

of benevolence, which, taking its rise in the first connections of the individuals, spreads thro' the whole social system, and issues in, and strongly prompts to public virtue, and the love of our country, and our species, in opposition to every thing that implies malevolence, selfishness and private spiritedness. But to be particular in its several branches rising from the lowest to the highest:

§ 3. (2.) Inasmuch as I have several things which I call my own, to which I have a right, being possessed of them either by the free gift of God, or by my own activity and industry, with his blessing, and find they are greatly useful to my comfort and well-being, and feel a great pleasure in the unmolested enjoyment of them, and trouble in being deprived of them: and when I am molested or deprived by any one, without having justly forfeited them by my own misconduct, I feel a strong sense of injury, and must therefore by reflection conclude, that every other person hath the same sense of injury in the like case as I have; it must therefore be my duty, and the first dictate of benevolence, not to do injury to others in any respect, whether it relates to their souls, bodies, names or estates, etc. and the rather, as I would wish to suffer no injury from them in any of these respects. (Part I. Chap. I. § 7.) This disposition is called innocence and inoffensiveness, in opposition to injuriousness and mischievousness.

§ 4. (3.) Particularly; since I know that I cannot endure to be hurt in my person, either in soul or body; to be robbed of my liberty, estate, wife or children; to be belied or misrepresented in my name or reputation, and to be deceived and imposed upon, or any wise oppressed in my dealings, etc., as I must conclude it to be wrong to treat others ill in any of these, or the like instances; so, on the other hand, for the same reason that I think it right, that, in subordination to the public sense and interest (*i. e.*, supposing no forfeiture) every one should allow me the quiet and peaceable enjoyment of my own, my innocence, life, limbs, liberty, estate, wife, children, etc., and speak nothing but the truth to me, and of me, and deal equitably and faithfully with me, and in every thing treat me as being what I am and have, (*Ibid.*) I must think it right, and my duty accordingly, from the same principle, to treat others with equity in all these respects, as I would wish to be treated by them in the like circumstances. And this duty is called justice, in the strict sense of it, which comprehends exemplariness, equity, truth

and faithfulness, in opposition to all instances of injustice; such as, tempting to sin, murder, maiming, adultery, fornication, stealth, robbery, oppression, lying, defamation, unfaithfulness to engagements, cheating, and all deceitfulness.

§ 5. (4.) For the like reasons; since I feel a great delight in being well respected, duly esteemed, well spoken of, and kindly treated by others (Part I. Chap. I. § 13.) I must think it my duty, from the same benevolent principle, to treat others with all such dispositions, acts and instances of kindness and good usage, as I should, in my turn, reasonably expect, and take pleasure in receiving; to be ready to all good offices in my power to others, whether neighbors or strangers, whether to their souls or bodies; to the best of them, and put the kindest and most favorable construction I can upon what they say or do; and to conduct towards them with humanity, candor, affability and courtesy. And as I find a great solace under pain and distress in the pity and assistance of others; so I must think it my duty to have the like sentiments of compassion and tenderness towards them in the like circumstances, whether of mind, body or estate, and should think I acted unnaturally, if I did not contribute all I could, consistent with other obligations, to their comfort and relief. Thus by reflecting and conceiving ourselves in each other's circumstances (Part I. Chap. I. § 5.) our love to ourselves becomes the foundation of our love to others, and causeth us to take pleasure in their enjoyments, and in communicating pleasure to them; to delight in good offices, and in speaking kindly to them, and of them; and to sympathize with them in their calamities, and be ready to relieve them. All which are implied in the general duty of charity, which therefore comprehends candor, affability, hospitality, mercy, tenderness and beneficence, in opposition to all instances of uncharitableness, such as censoriousness, moroseness, envy, ill-nature, cruelty and hardheartedness.

§ 6. (5.) Inasmuch as it is manifest, from what was observed above, under the first general head of the duty we owe to society, that it is incumbent upon us to do all we can to promote the weal of our fellow-creatures, and to have a principal zeal for the general good, on which our own welfare does very much depend (part I. Chap. I. § 13. and Part II. Chap. I. § 6.) and since there may be several things in our power, above and beyond what mere justice

and humanity require, wherein we may be useful to others, and to the public; I must think it my duty, from the same principle, to be of a free and generous spirit as far as I am able; to be forward and ready to every good work, and to delight in doing good, as God himself does, whereinsoever I may be useful in promoting His honor, and the good of mankind; and this from a sense of gratitude to Him for all I enjoy. This virtue is called liberality, generosity and magnificence, in opposition to covetousness and niggardliness, or a grudging, narrow and contracted spirit. And for any benefits received either of God or man, gratitude is due to the benefactor, in opposition to a stupid ungrateful spirit, which is extremely base and odious.

§ 7. (6.) Since the peace and quietness of society, which are indispensably necessary to its happiness, depend not only on our avoiding every thing that is injurious, and doing all that is just, kind and generous, but also upon every one's being contented in his own station, and faithfully endeavoring to discharge the duties of it, without intermeddling in affairs that do not belong to his province; and upon every one's being of a peace-making and forgiving spirit, (Part II. Chap. II. § 6.) I must therefore think it my duty to keep within my own sphere, and mind my own business, and do the duty that belongs to my own station; and if I have done any wrong, to repair the injury, and make restitution, and ask forgiveness, as well as to be of a forgiving spirit towards others, as I would hope God to be so towards me, and in a word, to do all that is in my power for promoting and preserving friendship, good neighborhood, and the public tranquility. These duties are called quietness, reasonableness, friendliness, and forgiveness, in opposition to ambition, contention, unfriendliness, and irreconcilableness.

§ 8. (7.) And lastly, since, according to the present condition of our nature, it cannot be but various relations and connections must obtain, as being necessary for the subsistence and well-being of our species, both in mind, body and estate; such as husband and wife, parents and children, masters and servants, magistrates and subjects, teachers and learners, etc. (Part I. Chap. I. § 13.) it must be my duty, which soever of these conditions I am placed in, to behave myself suitably to it. If I am a husband or wife, I must be tenderly loving, faithful and helpful: if I am a parent, I must

be tender of my helpless off-spring, and do all I can to instruct and form both their minds and manners to the best advantage, and provide for them in the best manner I am able, consistent with every other duty: and if I am a child, I must be grateful, and tenderly helpful, dutiful and obedient to my parents, from whom I derived, and on whom I do or have depended, when unable to help myself; and have a peculiar tenderness and friendship for my brethren and sisters, and other relatives: if I am a master, I must be just and kind to my servant; and if I am a servant, I must be dutiful, obedient and faithful to my master: if I am a magistrate, I must be zealous for the public good, and upright, faithful and impartial in my administration: and if I am subject, I must be submissive and orderly, in obedience to law and authority: if I am a teacher, I must be ready and faithful to guide and instruct: and if I am a learner, I must be willing to be guided, and ready to follow the instructions that are given me, and to reward the labors of such as have the care of me. In a word, if I am in any superior station of life, I must be treatable and condescending; and if in an inferior condition, I must be modest, respectful and decent in all my deportment; and whatsoever situation of life it is, wherein I am placed, I must take care to act up to my character, whatever it be; both in those lesser societies founded in nature, which are called families, and those larger societies founded in compact, whether tacit or explicit, called civil governments; to which all honor, submission and obedience, is due in all things lawful and honest, in opposition to all instances of turbulence, faction and rebellion. All which relative duties, in conjunction with the rest, are indispensibly necessary to the moral order, and the public peace and happiness of mankind, and terminate in that noblest of all social passions, the love of our country and our species, joined with an ardent zeal for every thing that concerns the public weal. And thus much for our duties towards society.

CHAP V

Of the Subordinate Duties, or Means for the more ready and faithful discharge of the Duties above explained.

§ 1. Having thus deduced, from the great principles of truth above demonstrated, the principal branches of moral duty founded

on them, both towards God, ourselves and our neighbors; I proceed now to enumerate the chief of those subordinate duties, which are to be performed as means of culture, for begetting, improving and perfecting in us those moral virtues. And this will be done in answer to the two last of those great enquiries (Introd. 27.), *viz.*, (v.) Whether I am what I ought to be? And if not, (vi.) What I ought to do, as a means in order to be and do what I ought, and so in order finally to answer the end of my being?

§ 2. The first of those two last enquiries will put us upon the great duty of self-examination, which is a duty of very great importance to us; for if we do not examine and truly know ourselves, and what is our real state, how shall we be able to rectify what is amiss, that we may be in a condition to give a good account of ourselves at last? And as Seneca says, *Illi mors gravis incubat, — qui nimis notus omnibus, — ignotus moritur sibi*. He dies a grievous death indeed, — who too much known to others, dies — a stranger to himself!

§ 3. (1.) Let this then be the first rule in order to answer the demands of these last questions, and the first means in order to become what I ought to be, *viz.* to inure myself to a habit of serious consideration; to suspend acting, till I have well weighed the importance of things (Part I. Chap. I. § 5.) that I may be under advantage to make a wise choice; and, according to Pythagoras's advice to his disciples,* to enter frequently into my own heart, and take a daily and exact survey of my life and conduct; to deal faithfully with myself, and to endeavor to think of my temper and behavior, as being what it really is, without partiality, and without hypocrisy.

§ 4. (2.) And as the knowledge of myself is of so great importance, let it be the next rule, that I entertain and cultivate within myself a due sense of the dignity of my reasonable, active and immortal nature, as exhibiting a small image of the Divinity (Part I. Chap. I. § 6, 7, 8. and Chap. II. § 5.), and have a great reverence for it as such. This would make me always careful to do nothing unworthy, indecent or misbecoming it; on the contrary, I should be concerned, on all occasions, to act the decent part in life, or what duly becomes it in all its relations. Let me especially have a great reverence for the sense of my own conscience, as

* *Carm. Aur. Vide Hierocles.*

being the divine light irradiating me within, and the voice of the Deity Himself, that I may take the utmost care, not to live in any course whatsoever for which my own reason and conscience shall reproach me; [for as one's conscience is properly one's self, it is the greatest madness in the world, for a man to live at a perpetual variance with himself, and the first point of wisdom, always to keep friends with himself.] ³⁷

§ 5. (3.) Since I depend wholly on God, and He is ever present with me, a constant spectator of all my behavior, in the inward temper and thoughts of my heart, as well as in all the outward actions of my life, and since I must expect to give an account of myself to Him (Part I. Chap. II. § 9. and 19.) it must be my next rule, by the frequent practice of meditation and devotion, to possess myself habitually of a most great and reverend sense of His universal presence, all-sufficiency and purity, as well as a most abasing sense of my own dependence, guilt and impotence, that I may be awfully careful to do nothing unworthy of His presence and inspection, and the relation I stand in to Him, and seriously endeavor, in a humble dependence upon His gracious assistance, so to guard and discipline my thoughts and affections, as well as my words and actions, that they may not be displeasing to His all-seeing eye, but may obtain His favor and approbation, [in whose moral character is contained all that is perfectly right and amiable in itself, and on whose approbation and friendship my happiness all depends.

§ 6. (4.) It will also be of very good use to promote in me every sort of virtue, and especially those of the social kind, to entertain a great sense and value of the opinion and estimation of mankind, who, even the most corrupt of them, and much more the best (whose esteem is highly to be valued) cannot but entertain a high opinion of virtue, and a reverence and esteem for the virtuous character, as well as a contempt of the vicious (Part I. Chap. I. § 11.), so that if I have any desire of either doing any good to them, or enjoying any good from them, it must deeply concern me to endeavor to recommend myself to their good opinion, and this can no otherwise be done, than by always acting the sober, honest, faithful, generous and benevolent part, in all my intercourse with them, which cannot fail of engaging an interest in their good-will, esteem and confi-

³⁷ Not in the first edition. [The Editors.]

dence, and must therefore be the wisest course I can take to answer all my most important purposes, with regard to my comfortable subsistence in this present life, as well as to qualify me for a better.] ³⁸

§ 7. (5.) If upon a due survey of my temper and behavior, I find I have acted an unreasonable and vicious part, as my own conscience will not fail to reproach me for it, so I cannot avoid feeling a great deal of uneasiness and remorse upon reflecting on my misconduct. (Part I. Chap. I. § 6. and Chap. III. § 11.) [Now whenever I feel any remorse or misgivings, I should do wisely to be so far from stifling, that I should rather indulge those sentiments, and let them have their course, and improve them into a truly contrite grief.] ³⁸ And if I am sorry for what is amiss in my conduct, as I ought to be, I shall utterly hate and abhor every vice, as being contrary to God, and all that is right and reasonable, and never be easy till I reform and return to my duty, and be governed by my reason and conscience, and a sense of duty to God, and every wise and good consideration, for the time to come. And herein consists the nature of true repentance and reformation. And,

§ 8. (6.) If I truly repent of my past misconduct, I shall be very watchful against all those temptations that I find myself exposed to, either from my own lusts and passions within, or from the solicitations of a corrupt and degenerate world without me (Part I. Chap. I. § 15.) As I must consider virtue to be my greatest interest, being my true perfection and happiness, I shall therefore avoid all ill places and bad company, where I am most liable to danger, and consider every person and thing as an enemy that hath a tendency to rob me of my innocence, and mislead me from a steadfast course of virtuous behavior; and [by consequence, I shall account those my best friends that most promote virtue by their good advice, example, etc., and therefore shall be ambitious of keeping the best company, and following the best examples.] ³⁸

§ 9. (7.) I shall carefully observe what is my ruling passion, and endeavor to make an advantage of it to promote the interest of virtue, and against all the tendencies of vice, and be more especially upon my guard against those particular failings, that I find my own constitution is peculiarly incident to, whether of the concupiscible or irascible kind; whether those of self-conceit, lust, covetous-

³⁸ Not in the first edition. [The Editors.]

ness, intemperance, etc., on the one hand, or those of resentment, anger, impatience, envy, revenge, etc., on the other; there being, perhaps, scarce a person to be found, but hath some particular tendency towards some one vice more than another, founded in the very frame of his nature, which administers matter and occasion for particular humiliation and continual discipline. (Part I. Chap. I. § 15.)

§ 10. (8.) If I find I have any such particular tendency, and have contracted any vicious habit by my indulgence to it, I must inure myself to self-denial and mortification, till I have got the ascendant of it: I must consider slavery as a most wretched and abject condition, and therefore never content myself, till I have gained and maintain the mastery of myself, so as to be at liberty readily to follow the dictates of my reason and conscience, and act up to the dignity of my rational active nature, and the several connections founded in my relation to God and my fellow creatures, and so become what I ought to be. (Part I. Chap. III. § 11.)

§ 11. (9.) In order that I may discipline myself to a readiness in denying myself in things unlawful, and the more effectually tame and subdue my untoward lusts and passions, and keep them under a due regimen; it may be very fit and useful that I frequently practise self-denial in things lawful and indifferent; [for if I always accustom myself to go to the utmost bounds of my lawful liberty, it is a million to one but I shall be frequently trespassing upon them:] ³⁹ for which reason I should do well, by frequent fasting, to deny myself such measures or kinds of food and drink, etc., as might otherwise be lawfully indulged; and particularly such as have a peculiar tendency to inflame my lusts and passions. (Part II. Chap. II. § 4.)

§ 12. (10.) [I must, from a sense both of the glory and dignity of virtue, and my duty to Almighty God, resolutely go into every virtuous practice, however so much against the grain, in which I shall act the truly heroic and manly part;] ³⁹ nor must I content myself in any certain pitch of virtue to which I imagine myself to have attained, but must press forward, and persevere in a continual struggle, and perpetual warfare, throughout my whole life, and be daily endeavoring to make all possible proficiency in virtue, till I gain the utmost facility and readiness in every virtuous practice

³⁹ Not in the first edition. [The Editors.]

that the frailty of my nature will admit of. (Part I. Chap. III. § 21.)

[§ 13. (11.) In order to this, I should do well to consider seriously the vast importance of that inestimable talent, time, of which I must expect to give an account to the Author and Preserver of my being, as well as of all my other talents. Let therefore an habitual sense of the shortness, at the utmost, and of the extreme uncertainty of my life, be ever present and uppermost in my thoughts, that I may husband every moment to the best advantage for the doing what good I can, and acquiring of true wisdom and virtue, which are treasures of the most inestimable value, as being those only which can make me truly useful and happy here, and which alone I can carry with me into the future state of my existence, and which will make me for ever and completely happy, when time shall be no more (Part I. Chap. III. § 21.)] ⁴⁰

§ 14. (12.) And, lastly, in order to my being the more effectually engaged to the faithful discharge of my duty, in conforming to all the laws of virtue, I must endeavor to keep up in my mind an habitual sense of their most weighty sanctions, *viz.* [the happiness or misery unavoidably attending my obedience or disobedience, both in this and the future state. In this present life there is on the side of virtue the truest enjoyment of all reasonable pleasures, without that remorse and terror which attends those that are unreasonable and vicious; health of body, and peace of mind; the love, esteem and confidence of men, and the approbation, favor and blessing of God; true joy and satisfaction in prosperity, and solid comfort and calmness in adversity; the most reasonable prospect of success in our affairs here, and a most comfortable prospect of happiness hereafter; so that if there was to be no life after this, a course of virtue would be infinitely preferable to that of vice, which is unavoidably attended with endless mischiefs and perplexities. The wicked are like the troubled sea, and seldom live out half their days; whereas, the ways of wisdom and virtue “are ways of pleasantness, and all her paths are peace; length of days is in her right-hand, and in her left-hand riches and honor.” Sup. 6, and Part I. Chap. III. § 11.] ⁴⁰

§ 15. But then if we look forward to the life to come, there opens a most glorious prospect for eternal ages. As on the one hand there

⁴⁰ Not in the first edition. [The Editors.]

are most tremendous punishments attending our disobedience, there being unavoidable pain and exquisite misery necessarily connected with every vice, arising from the remorse and reproaches of our own minds, and the fearful apprehensions and dismal effects of the divine displeasure: so, on the other hand, there are as certain and most glorious rewards attending a course of obedience, there being unspeakable pleasure and exquisite happiness necessarily connected with the practice of every virtue, arising both from the natural fruits and effects thereof, and from the approbation and applauses of our own minds; from all the delights of a happy society, and from the favor and friendship of Almighty God, to the endless ages of eternity. (Part I. Chap. III. § 11. and II. 19.)

§ 16. [If I diligently attend to these things, and live in the constant practice of them, together with the daily offices of true devotion, having thereby a frequent intercourse with the great Father of Spirits, and pattern of all moral perfection, which vastly tends to the proficiency of virtue,] ⁴¹ I shall, at length, be so inured to the love and practice of every virtue, human, divine and social, in the perfection of which consists the highest happiness of my reasonable and immortal nature, that I shall at length be prepared to quit this present stage, and to give a good account of myself to God, being in some good measure qualified for that perfect state of virtue and consummate happiness, which is to be expected in the future state of my existence; according to that excellent saying of the wise King, “the path of the just is like the shining light, which shineth more and more unto the perfect day.”

CHAP. VI

Of the Connection between the Law or Religion of Nature and Christianity.

§ 1. Having thus given a short sketch of the first great principles of ⁴² moral philosophy, or what is called the religion or law of nature, as being founded in the nature of God and man, and

⁴¹ Not in the first edition. [The Editors.]

⁴² The first paragraph of the first edition continues as follows: “Moral philosophy, which is called the religion of nature, all which appear to me strictly demonstrable from the first principles of reason, as being founded in the nature of things; and have most, if not all of them, been in some measure discovered by men of genius in the heathen world, who were destitute of reve-

the relation between Him and us, and our relation one to another, in conformity to which consisteth the highest perfection and happiness of human nature, and may therefore be called the religion of the end,* and also the chief of those subordinate duties subservient thereunto, which may be called the religion of the means: I shall now conclude, by giving a very short summary of revealed religion, and show the connection between them and Christianity, or the Religion of the Mediator, which is to be considered as the great infallible means of our instruction and reformation, for begetting, improving and perfecting in us all the virtues of an honest heart, and a good life, and for ascertaining to us the favor of God, and a blessed immortality; to which it is so admirably subservient, that it should seem the greatest inconsistency imaginable for a man to be a real friend to what is called natural religion or morality, and at the same time not to adhere firmly to the Christian system.

§ 2. For altho' these great truths and duties appear thus evident and demonstrable, in the nature of things, to any serious, thinking and considerate person, who hath had means of information, and leisure to give a proper attention to them; and many wise men in the heathen world (doubtless much assisted in these enquiries, by instructions handed down to them by tradition, from the first parents and intermediate ancestors of mankind) have made very great proficiency in these speculations; yet it must be allowed, that so many are the cares and businesses, and the pleasures and amusements of this life, which do unavoidably engage the attention of the general rate and bulk of mankind, that it cannot be expected they should ever attain to the distinct practical knowledge of them, in their present condition, without instruction from above. So that an express revelation is highly expedient, and indeed extremely necessary, as a means in order to render men in any tolerable measure capable of answering the end of their being; especially if it be considered, that no philosopher or teacher, without a sufficiently attested commission from God, even if he could discover all

lation, though perhaps somewhat enlightened by ancient tradition from the beginning. I would now only add a few words to show the connection between them and Christianity, or revealed religion, which is to be considered only as a further means for our instruction and to beget, improve and perfect in us all the virtues of an honest heart and a good life." [The Editors.]

* Dr. Scott, p. I.

these laws of nature, could have authority to enjoin them, as being what indeed they are, the laws of God, without which they would make but a small impression on them; and that this would be the most direct and compendious method of answering this purpose.*

§ 3. And indeed, considering that the wisdom, power and goodness of the Deity are such, as could not fail to enable and dispose Him to do all that was fit and necessary to conduct the creatures which He had made (and would not desert) to that happiness which was the end of their being; I cannot doubt but that even the first parents of mankind, upon their first coming into being, and in their state of innocence, being then perfect strangers to every thing about them, and having every thing to learn that related to their well-being, must, in some manner or other, have been taught by God himself, many things relating to food, language, the origin of things, philosophy and religion, etc., (at least so much as was necessary for them to begin with) in order to their well-being and happiness. And when they had sinned against him, and fallen into a state of mortality and misery, it is natural to conclude, from the same goodness and compassion of the Father of Mercies, that he would take pity of them, and teach them (what they could no otherwise know) in what method, and upon what terms, they should be pardoned and restored to his favor, and how they should conduct for the future, so as to be accepted with him, and restored to that immortality which they had lost.⁴³ All this is also very

* *Vide* Lactant. L. III. C. 26, 27.

⁴³ W. Smith in the third edition omits the last sentence of this paragraph, and for paragraph 4 he substitutes the following:

“IV. I say all this is reasonably to be expected from the goodness of God. And we find the fact was accordingly so. God signified to our first parents themselves, after their fall, his grand design of sending a savior and instructor into the world, and gave them hopes of being reconciled to his favor. To their immediate descendants he also shadowed forth the several circumstances of this great work, by the institution of sacrifices, particularly of the Paschal Lamb at the Feast of the Passover, and by several types and emblems. In the following ages the holy prophets, by his divine inspiration, explained the spiritual meaning of these types, etc., and discovered more and more of the grand plan.

“Thus it appears, that from the beginning, there was one uniform consistent scheme, carried on, aiming all along at one end; namely, the instruction and reformation of mankind, their restoration to the divine favor, and their sincere and persevering obedience to the original Law of their Nature, finally to issue in their entire perfection and happiness.” [The Editors.]

agreeable to the most ancient authentic account we have of the origin of mankind.

[§ 4. From which account rightly understood,* it appears, that as God had, very probably before the Fall, made the Garden of Eden an emblem and means of instruction, both in philosophy and religion, and explained his necessary existence and personality in a coessential Trinity, signified by the divine names, and represented by the sun as an emblem, in his threefold condition of fire, light and spirit (He being to the intellectual world analogous to what the sun is to the sensible) so it is no less probable that he set up the cherubims with the flame and sword as hieroglyphics or emblems of the Gospel, to teach man, after the Fall, how to obtain pardon, and regain the immortality he had lost, which was represented by the Tree of Life; by instructing Him, not only in the knowledge of the Trinity, Father, Son and Holy Ghost, but also of the incarnation, sacrifice, satisfaction and intercession of the Son of God, in the fulness of time to appear as the Instructor, Redeemer, Lord and Judge of mankind, and of the presence and assistance of the Spirit of God for our renovation and sanctification. At least this is certain, that sacrifice must have been then instituted as an emblematical means of reconciliation, and hopes were given of a glorious person, who should recover them from the mischief into which the tempter had seduced them; † all which were doubtless much more particularly explained to them, than is accounted for in the very short history of the Fall; and no account can be given how human sacrifices, polytheism and idolatry could have obtained among mankind, but upon supposition of their being so many corruptions of these original emblems and instructions, as popery is of Christianity. And as the law of Moses was, doubtless, a revival of these original symbols and instructions, with laws to guard against those corruptions; so God, by the spirit of prophecy, explained more and more in the following ages the spiritual meaning of those types, and the great design He had in view, and had in some measure discovered: and there manifestly appears, in the whole, to have been one uniform consistent scheme carried on, from the beginning downward, aiming all along at one end, viz. the instruction and reformation of mankind; their restoration to

* *Vide* Mr. Hutchinson's *Works*, or Lord President Forbes's *Thoughts concerning Religion*, which deserve to be well considered.

† *Vide* Bishop Sherlock on *Prophecy*; and Shuckford's *Connection*.

the divine favor, and a sincere and persevering obedience to the original law of their nature, finally to issue in their entire perfection and happiness.*] ⁴⁴

§ 5. Accordingly (1.) we have abundant evidence, both from prophecy and miracles, and undoubted tradition ever since, that God (after such a series of introductory instructions, revelations and institutions from the beginning) did at length send a glorious Person into our nature, whom He declared to be His own Son, and who, [being truly God of God] ⁴⁵ had inexpressible glory with Him, [even from eternity,] ⁴⁶ before the world was, being the brightness of His glory, and the express image of His person, and by whom He visibly displayed and exerted His almighty wisdom and authority, in the creation and government of the world, and in whom dwelt the fulness of the Godhead bodily in His incarnate state. This glorious Person God sent among us, to act as a mediator between Him and us: for as we are sinners, it was very fit He should treat with us by a mediator; and as we are men, it was no less proper, that He should do it by one that should appear in our own nature, and converse familiarly among us, that he might the better instruct us by his example as well as his precepts.

§ 6. And (2.) as this was fit in itself, so accordingly the fact was, that in his incarnate state, He abundantly proved by his miracles, that He was indeed a teacher come from God; and, being clothed with divine authority, He taught us all the great principles of moral truth and duty, above demonstrated, much more clearly than they had ever been known before, together with others merely depending on revelation and institution, relating to his mediation and the New Covenant; and that in a manner and language, admirably suited to make the strongest impressions upon the minds of men, not only of the more thinking, but even of the general rate and lower sort of the human kind; and enjoined them upon us, under the most weighty sanctions, and affecting considerations, as the will and law of God concerning us; and at the same time set us a most amiable Example, that we should follow his steps.

§ 7. And (3.) as it was very necessary, that we should be strongly affected with a sense of the heinousness of sin, as the most

* *Vide* Bishop Butler's *Analogy*.

⁴⁴ Not in the first edition. [The Editors.]

⁴⁵ Not in the first edition; see Johnson's letter to Benjamin Colman. [The Editors.]

effectual means to bring us to repentance, and at the same time have sufficient security for pardon, upon our repentance, it pleased God to appoint that His blessed Son incarnate (freely submitting to it) should die for both these purposes; that He should die for us, a sacrifice for the atonement of our sins, to redeem us out of the hands of divine justice and open a way for mercy to take place consistent therewith; to make a strong impression upon our minds of the greatness of our guilt, and the heinousness of our sins, in order the more effectually to induce us to repent of them, and forsake them; and to purchase and ascertain to us pardon and acceptance, upon our repentance and reformation; which merciful purpose and intention He had exhibited from the beginning by the institution of sacrifices. Accordingly the blessed Jesus was graciously pleased to submit to a most painful and ignominious death for our sakes, making his soul an offering for our sins, as the true antitype of all the ancient sacrifices (in which He had been exhibited, as the Lamb slain from the foundation of the world.) And thereupon, in virtue of the right thereby acquired, He did, in God's Name, promise and ascertain, thro' His merits and mediation, pardon to our sincere repentance and faith in Him, and the acceptance of our faithful, tho' very weak endeavors, to yield a constant and persevering obedience to all His holy laws for the time to come.

§ 8. And (4.) because of our great weakness and inability to repent, believe and obey, without God's help, amid so many temptations to the contrary; He hath also, for Christ's sake, sent His Holy Spirit (by whom He hath always immediately exerted His Almighty Will and Power, in the creation, preservation and government of the world) and promised his gracious assistance to our earnest prayers and endeavors, to enable us to withstand the temptations that lie in our way, to mortify our lusts and vicious habits, and to comply with all the duties incumbent upon us: Who, accordingly, is ever ready to assist us in all our honest and faithful endeavors, and to render them effectual for the renovation of our souls, and to enable us to bring forth fruits meet for repentance, even all the fruits of a sincere, universal and persevering obedience to the gospel.

§ 9. And (5.) since as things now stand, we cannot have much else in view here, besides a short and uncertain life, attended with

many calamities, and issuing in the death or dissolution of our bodies; and should otherwise have been generally attended with much darkness and uncertainty about a future life; Christ hath moreover, by his sufferings and death in our behalf, taken away the curse and sting of our calamities and dissolution, and turned them into a blessing, and made them a means of promoting our greatest good; and hath by his triumphant resurrection and ascension, opened to us the glorious views of a blessed immortality both in body and soul, and ascertained to us an eternal life of unspeakable happiness to be bestowed upon us, in consequence of our final perseverance in well-doing conformable to his instructions.

§ 10. And (6.) in the mean time, and in order to qualify us therefor; as we could not, without instruction from above, be well assured what worship and service would be acceptable to God, it was very needful that Christ should teach us how to worship and adore him acceptably, even in spirit and in truth. For as God hath been pleased to derive down all his blessings and favors to us thro' the mediation of his blessed Son, and by the influence of his Holy Spirit, so (as these relations demand correspondent duties) it is fit, as he hath taught us, that all our worship and service, our prayers and praises, and all our hopes of acceptance, should be offered up to Him, in dependence on the influence and assistance of his Holy Spirit, and through the merits and mediation of his dear Son, who is the very truth (the way, the truth and the life) as the condition of their obtaining favor and acceptance with him.

§ 11. And (7, and lastly) as every thing that concerneth the weal of mankind is best promoted by social combination; so God hath by his Son Jesus Christ, the great Messenger of his Covenant, appointed that we should jointly combine and unite together in promoting our happiness, which is the great end of our being, and particularly that we should live in the constant exercise of social religion for that purpose. He hath therefore instituted baptism, as a rite of our admission into this society, to represent and oblige us to all purity and holiness in heart and life, and to seal to us the great and precious promises of the Covenant of Grace; and the holy Eucharist, as a further means to satisfy and confirm them, and to keep up in our minds a lively sense of His sufferings and death, and of the mighty obligations we are under, from His dying love to us, to be faithful to Him who died for us, and

arose again, and who is the great author and finisher of our faith; and moreover to persevere in love and unity, as brethren and fellow members of that holy community of all good men and angels, whereof he is the head and lord. And as he would have us live in the constant use of these means for the promoting in us all the virtues of a holy life, which contribute to our final happiness, he hath appointed an order of men to administer these sacred rites, and to preside in the exercise of this social religion and worship, and to explain and inculcate the divine philosophy which he hath taught us, in order to qualify and prepare us for that eternal happiness which he hath provided and ascertained to us; [so that we are to consider the church and public worship as the school of Christ, wherein immortal spirits clothed with flesh, are to be trained and bred up as candidates for eternal glory.] ⁴⁶

§ 12. Now therefore, all those who do firmly believe all the great truths of this holy religion, whether natural or revealed, *i. e.*, whether founded in nature, or merely depending on revelation; and who under the influence of them, do by faith look for assistance and acceptance, only through His mediation, and in the method which He hath prescribed; and who, conformable to this holy discipline of Christianity, do heartily repent and forsake their sins, and return to their duty, and faithfully live and act in all their behavior, both towards God and man, from a sense of duty and gratitude to God, their great creator and benefactor, and to Jesus Christ, their great mediator, law-giver and judge, and persevere in their obedience, faithful to the death, all these are said to be true Christians; and, even while they continue here, they belong to that heavenly community which is called His Kingdom, whereof He is the head, lord and king, the great vice-gerent of God the Father, and shall, through His merits and mediation, be accepted in Him, and be inconceivably happy with Him, in his glorious kingdom in the life to come.⁴⁷

⁴⁶ Not in the first edition. [The Editors.]

⁴⁷ W. Smith in the third edition adds the following: "They shall sit down with the patriarchs and worthies of elder days, together with all the holy hierarchies of heaven,—

" "Angels and seraphs glowing round his throne,
And radiant ranks of essences unknown,
To crop the roses of immortal youth,
And drink the fountain-head of sacred truth;
To swim in seas of bliss, to strike the string,

And lift their voice to their almighty king;
To lose eternity in grateful lays,
And fill Heaven's wide circumference with praise.'

“Dr. Young.”

[The Editors.]

FINIS

MR. WOLLASTON'S PRAYER

Enlarged, *R. N.* Page 120.⁴⁸

1. O Thou Almighty Being, on whom dependeth the existence of the world, and every creature therein, and by whom all things are governed and conducted to the several ends of their being, according to the various natures which Thou hast given them: by whose good providence I have been brought into being, and most kindly

⁴⁸ W. Smith in the third edition, in place of this prayer, has a longer recapitulatory prayer of his own, which he prefaced as follows:

“Having in the former chapters given a brief view of those duties, divine, moral and social, which when once discovered either by reason or revelation, evidently appear to be founded in the nature of things, and the relations in which we stand; I shall now add a prayer, which I doubt not, the Christian philosopher, from what has been said above, will by this time be disposed and qualified to offer up with understanding, for the divine grace and assistance, to enable him to practice what he has thus discovered as undeniably due to himself, his God, and his neighbor.

“A philosophical prayer, founded on the truths and duties which are the subject of the foregoing system.

“[Footnote] The Editor was of opinion that a prayer on this model, which might be a summary recapitulation of the foregoing treatise, and also contain petitions for the divine aid in discharging the duties discovered in it, would be of the greatest use to the reader. Hence the prayer consists of the same parts of which the treatise itself consists: *viz.* first, the speculative truths relating to God, which make the address and acknowledgment of Him; and the speculative truths relating to ourselves, which make the confession. Secondly, the practical duties that result from the said truths, which are moral, divine and social. Petitions for grace to discharge these aright make the petitory parts of the prayer. But it is not meant however as a complete form. For intercession, thanksgiving, etc., could no otherwise make a part of it on this plan, than by praying for the regular discharge of them as duties.

“In the former editions, the author had a short prayer on the model of Mr. Wollaston's, in his *Religion of Nature*. But the Editor took the liberty to substitute this larger composition in its stead, for the reasons already given, as he was empowered and requested to make what improvements might occur to him in correcting the press. This is mentioned expressly, that whatever fault is found with this performance, which is the only material alteration in the whole book, it may not be charged to the author.”

[The Editors.]

preserved and provided for, from the beginning of my life to this moment, and enjoyed many undeserved advantages and favors, with regard both to my well-being in this life, and my everlasting happiness in the life to come; and especially the inestimable advantages of Thy Holy Gospel, made known to us in Thy Name, by Thy blessed Son Jesus Christ, and all that He hath taught, and done, and suffered for us; I beseech Thee graciously to accept of my most grateful sense and acknowledgment of all Thy bounty and beneficence towards me. Bless Jehovah, O my soul, and all that is within me, bless his holy name: bless Jehovah, O my soul, and forget not all his benefits: who forgiveth all thine iniquities, and healeth all thine infirmities: who redeemeth thy life from destruction, and crowneth thee with loving kindness and tender mercies! Bless Jehovah, O my soul!

2. And whereas, notwithstanding the mighty obligations of Thy goodness, I have, in many instances, ungratefully and perversely sinned against Thy most righteous and reasonable laws, in neglecting to do what Thou hast commanded, and in doing what Thou hast forbidden; I humbly profess before Thee, my utter abhorrence of all my perverseness, and my serious resolution, by Thy grace, to be more watchful against all temptations, and to amend my conduct for the time to come. And I do most earnestly beg the forgiveness of my many offences, through Thy infinite mercies in Thy Son Jesus Christ, and that Thou wilt for His sake, deliver me and others from the evil consequences of all my transgressions and follies. And I humbly beseech the assistance of Thy Holy Spirit, to endue me with such dispositions and powers, as may carry me innocently and safely through all future trials; and to enable me upon all occasions, from a sense of duty to Thee, my God, to behave myself conformable to Thy most holy laws, which are indeed the laws of reason and nature, in all wisdom, probity and virtue, and in the faithful discharge of all the duties of temperance, piety and benevolence, with a humble dependence upon Thy infinite wisdom, power and goodness, and under a lively and habitual sense of Thy all-seeing eye, and the account I am to give of myself to Thee.

3. I humbly beg leave to commend both myself and mine to Thy most gracious protection and conduct, this day, and at all times. Suffer none of Thy creatures to injure us, no misfortune to befall us, nor us to hurt ourselves or others, by any error or misconduct

of our own. And vouchsafe us clear and distinct apprehensions, and a right judgment in all things, together with all virtuous tempers and dispositions, and so much health and prosperity as may be truly good for us in this our present state of probation. Grant that I may, at least, pass my time in peace, with contentment and tranquillity of mind; and, that having faithfully discharged my duty to Thee, my God, to my family and friends, and to my country and all mankind, and endeavored to improve myself in all virtuous habits, and useful knowledge, and done all the good I could, throughout the whole course of my continuance in this world, I may at last, calmly and decently take my departure from this present stage, and then happily find myself in a better state; even a state of unmixed and endless happiness in the life to come.

All which, and whatsoever else Thou seest needful for me and my friends, and all Thy people, and for all orders and conditions of mankind, and especially the afflicted, I humbly beg, thro' the merits and mediation of Thy blessed Son Jesus Christ, comprehending them with myself, in that most excellent form of prayer which He hath taught us; Our Father, etc.

The END

PART XI

RAPHAEL

OR

THE GENIUS OF THE ENGLISH AMERICA

A Rhapsody

There is no date on this manuscript, but it was probably written after 1763. [The Editors.]

RAPHAEL
OR
THE GENIUS OF THE ENGLISH AMERICA

PART I

Aristocles to Crito

1. I should be wanting (dear Crito) in that friendship which has many years subsisted between us, if I should neglect to give you an account of a most important conversation which happened to me not long since. I was invited one evening by a pleasant setting sun and a serene fragrant air to take a walk in a delightful neighboring field, amidst a most beautiful grove of trees of various sorts, where Nature had plentifully poured out her verdure and bounty. It is under a gradually rising hill, at the foot of which runs rushing down among the rocks, and sometimes with sudden rapid falls, a most delicious rivulet of pure water; on the one hand, taking its rise from a thicket of trees, and on the other hand, losing itself in a gentle winding stream amidst grass and flowers of various hue, in a pleasant meadow below; beyond which, on one side, the sea at a distance, with two or three small islands, terminates the prospect, and on the other, a beautiful landscape of pleasant pastures, flocks, and herds, and a delightful country village with mighty hills and vales beyond them, of various heights and distances.

In this place I delight sometimes solitary, and sometimes in company with a philosophical friend to spend an hour or two of vacant time, and being at this time alone, I was deeply musing on the weakness of human nature, and the many empty debates in philosophy, religion and politics that obtain among the inhabitants of this our mansion, and considering how easily they might most of them be accommodated, did men but give themselves leave calmly to think and reflect and consider things as being what they really are, without suffering themselves to be imposed on by empty names and sounds, without prejudice and partiality and with that temper wherewith it becomes them to treat one another, and duly

disengaged from every consideration besides the pure disinterested love of truth and right. This led me to think what a contemptible figure they must needs make in the eyes of those superior intelligences who are the immediate attendants of the Almighty, and are said to be by Him appointed the guardians of human affairs. Surely, thought I, if they know what passes among us, they must think as despicably of our low way of thinking, and of the trifling controversies that subsist among us, as we do of the low imaginations and little squabbles and debates that pass among children.

2. While I was thus entertaining my thoughts, I was surprised upon casting my eyes among the trees towards the top of the hill, with the sight of a seemingly extraordinary person coming towards me in the habit of the remotest antiquity, with a most venerable but pleasant and benign aspect, of a beautiful countenance and agreeable air, mixed with seriousness, sweetness, and benevolence. As he approached me I soon discovered in myself signs of awe and surprise because his habit and manner were such as bespoke him an appearance certainly very extraordinary, and as he came up, I addressed him with ceremonies of the profoundest respect and veneration; whereupon with an air of the greatest tenderness and compassion for my surprise, he spoke to me and said: Be not surprised, O Aristocles, or in the least concerned at my making this sudden and extraordinary appearance to you in this solitary place; for I am your friend and the friend of mankind, and am neither a stranger to your name nor condition in the world, nor to the affairs of the rest of your species, and come to you with no other views than those of benevolence towards you and that race of intelligent beings to which you belong, and to suggest to you several things in the course of a few hours conversation which it may be of use to you and your country to consider in order to promote their good and happiness.

May I then, said I, presume upon your great benignity and condescension so far as to express my desire of knowing who it is I have the honor to speak to and that thus deigns to converse with me in this retired place? Be not, said he, in the least surprised if I let you know that I am indeed one of an order of intelligences superior to you, not clothed with flesh and blood, nor confined to the same laws and limitations of being and acting to which you are tied in this your state of probation. But know, however, that

by how much greater the dignity is to which the rational nature is advanced in the intelligent and moral system, by so much the more it abounds in what you call humanity, candor, and benevolence; and therefore you are at liberty without reserve or distance and without fear or diffidence to ask me any questions you shall think proper, and to converse with me with the same openness, freedom and ease and with as little ceremony as you would with any of your friends or such as you have a respectful regard for among your own species; and for this present intercourse you may call me Raphael.

This, I said, is an instance of unspeakable goodness and condescension, and which I am not able to express sufficient thankfulness for; and I shall endeavor to use the liberty you have given me with that deference and veneration which is due to your superior nature and character. May I know then, continued I, the occasion of this your unexpected appearance and condescending intercourse with one of our inferior order of rational beings in this lower world? — In order to this, said he, you must know (what indeed you are not altogether ignorant of) that of us who are continually employed on the greatest and important behests of the most high God, father of spirits, the almighty creator and supreme king and lord of all things and his great Son and vice-regent, the visible creator, lord and governor of the whole natural and moral world, and whose business it is to minister to Him in the moral government of the whole rational creation, I say, of us some there are who are destined to inspect the affairs of particular kingdoms, countries, and provinces, and to promote the general good and welfare of the nations or people assigned to our charge; and the business allotted to me is to be the guardian or genius of New England. In this quality it is that I now appear to you with a design, as I said, to communicate a few things which, if duly attended to, may have some tendency to render you a flourishing and happy people. And the reason why I appear to you in this solitary retreat, is because I know you are extremely solicitous for the public good of mankind and your country, and at leisure to attend to what may be suggested to you on this subject, and would willingly communicate it to others.

3. This, said I, O venerable Raphael, I should gladly do, and nothing could give me greater satisfaction than to be in-

structed in what may contribute to the good of my species, and particularly my dear country; for nothing so much distresses me as to behold mankind by their own folly and perverseness (as by their conduct one would be tempted to imagine), contriving to make themselves miserable; as on the other hand nothing could give me a more exquisite pleasure than to discover, if it were possible, what might recover them from their madness and waywardness, and put them in a way to prosecute their true and genuine happiness. This earnest concern of yours for the public good, O Aristocles (said he, with a most benign smiling aspect), is truly a noble and divine passion, and could everyone be in some good measure possessed of it, this one thing would lay an effectual foundation for public weal: for did every one consider himself but as a part of the moral system so related to the whole that his own private weal and happiness is bound up in, and depends on the general weal of mankind, and especially of the community he belongs to, he would then even from the principle of self love, find himself necessitated to love and study the general good of mankind and his country, and be always ready to promote every thing that contributes to it, as a necessary means and indeed the only course he can take to promote and secure his own welfare. Necessary therefore it is that he should consider mankind as being what they really are, the creatures of God, and all children of the same common parent, made by Him for society and so constituted as that by the necessity of their nature they depend not only on Him their common Father, but even on one-another for their happiness in such a manner that every one must necessarily seek his own good in that of the whole community of his fellow creatures, and especially those that are about him, as being all partakers of the same nature, liable to the same wants and necessities, and exposed to the same dangers and difficulties, and all being made for the same kind of happiness, they must therefore be considered to have one common interest. He would then look on every one of his race with a brother's eye and a brother's kindness, tenderness and compassion, and contribute all he could to the general weal of the whole great family of that heavenly parent on whom they all equally depend, and to whom they are alike allied.

Alas! said I, instead of this, we are apt every one to consider himself alone as the center of all his views and pursuits, and to sacrifice not only every particular person's interest to his own,

but even that of the whole community to which he belongs. This, replied Raphael, is owing to a certain abject meanness of soul, and can be derived from nothing else but a most despicable narrowness of mind. In short it flows from such a contemptible, grovelling temper that one would think, whoever should look inward on himself and find this to be the case with him, would be so much ashamed as even to abhor himself as one of a most odious character, as one of a most wretched, contracted, unthinking soul, incapable of reflection and therefore of a brutish disposition, nay, indeed of a temper worse than brutish, for there are many kinds of brute animals which are remarkable for a joint tendency among the individuals in their whole economy towards the general good of each of their several tribes, and should be looked on as so many noble examples or emblems by which the God of nature would teach this divine lesson to the human race. Necessary therefore it is, if men would in earnest contrive to be happy, that they should awaken their attention to the consideration of things as being what they really are and enlarge their views taking into their thoughts the whole system at once of which each one is but a part, and so a part, that he can no more subsist happily without regard to the whole and earnestly contributing to the weal of it, than his leg or arm without the health of his whole body, or the branch of a tree without the life and good order of its trunk, or the tree itself without the earth and the sun and rain.

4. I could not forbear breaking out here in a piteous lamentation on the wretched condition of that poor unhappy race of mortals to which I belong: O miserable species of animals this, which is called human kind! (Said I, with a deep sigh.) We seem made for thinking and reflection, but it is the least of what we really do; we suffer appetite, passion, interest, anything to bear sway in us, and prevail with us rather than reason, consideration and truth! We are easily carried down the stream of a senseless, untoward, impetuous humor, and have not resolution to muster up force of mind and thought sufficient to stem the current. 'Tis not reason or a sense of what is right that generally governs or has the least influence in that affair, but it is education, 'tis custom, 'tis interest, 'tis prejudice, 'tis empty names and sounds, 'tis fondness for a party or some great name or chief manager, 'tis everything besides what it should be that possesses, biasses and determines us on all

occasions. Such poor weak despicable creatures we are, that I protest I am sometimes tempted to think we are beneath the Almighty's care, some blasted race that He has abandoned to themselves without designing to concern himself any further about them! — You are very right, said he, O dear Aristocles, in having such a tender, compassionate sense of the unhappy condition of your species, but would be as much in the wrong to go into such a conclusion about them. Weak, low and untoward as they are, they are rational and immortal spirits, and as such they are natures of very great dignity, and ought to be dearly loved and their weal solicitously sought and tendered. You must be content to take them as they are and endeavor to make the best of them. You must deal tenderly with them, pity their weakness and patiently bear with their forwardness. Let therefore all your conduct one towards another be animated with benevolence and breathe nothing but compassion and love. O divine charity! Could that but reign in the hearts of men and banish the sour, ill-natured, censorious, hard-hearted passions, it would be the greatest means of recovering them from their degeneracy, for they would then indeed do all that they could to recover both each one himself and one another. This truly noble temper, therefore, you must possess yourself of, and endeavor all that you can to propagate and cultivate among others; for you can in nothing more imitate and resemble God, the great Father of Spirits, who, weak, perverse, despicable as they are, is so far from neglecting¹ and attention, for the sake of mere shadows to gild over any empty and uncertain and sometimes false and pernicious opinions with the sacred name of truth. For, what is truth but the knowledge of things as being what they really are? And what is right but a conduct conformable thereto? And what can be happier than these united when all the powers of the soul enjoy their proper objects without diffidence, distrust or anxiety, and everything in the soul is order, harmony, stability, peace and joy? Whereas on the other hand, a mind not utterly lost to all sense of itself and its true interest must needs be continually worried in endless mazes of anxiety, that is ever fluctuating in doubt, scepticism and uncertainty, or under a perpetual delusion, — mistaking sounds for things, and grasping at shadows instead of substance. If such an one conceits himself happy, it must be only an imaginary happiness like a golden dream

¹ Two pages of manuscript missing. [The Editors.]

or the empty enjoyments which a child values itself upon, but are mean, trifling and contemptible in the eyes of a man.

He therefore that would be really happy must set down this as the only unshaken foundation whereon to build his happiness, that he lay aside and even trample upon every other consideration besides the mere love of truth for its own sake, and that he defy and spurn at everything that stands in competition with it; that anxiously pursuing that alone, he readily and candidly lend his ear without prejudice or partiality to everything that can be offered on each side of a question; that in order to this, he be scrupulously careful not to be misled by names and sounds, but diligently attend to the things themselves and the true intent and meaning of the language he uses about them; that he apply himself to consider them with the utmost force of attention he is capable of, animated with a most solicitous care not to be deceived or led into error; that he diligently and exactly examine the truth and certainty of his principles and see to it that the consequences he draws from them be really in the nature of things connected with them, and do certainly flow from them; and finally, that embracing the truth in the love of it he act up to it and govern all his appetites and passions, and form his whole conduct and behavior according to its sacred dictates, being honestly and resolutely engaged to follow whithersoever that leads. It is indeed necessary that he set out on every inquiry with this resolution or otherwise he will be in danger of being biassed and misled in the several steps he takes. He must therefore be prepared with that resigned temper that will make him sincerely willing to sacrifice every interest, houses, land, wife, children, every lust and every passion to the love of truth and right, and then he may depend upon this that he will not fail of being possessed of them, nor of being infinitely happier in the enjoyment of them than he could possibly be in anything that he sacrifices to this sacred interest.

6. Undoubtedly, said I, O divine Raphael, it is vastly more owing to the want of this noble resigned temper than from any other cause that so many fail of truth and fall into error and vice. But as the want of this teachable, honest, obedient disposition, this disinterested love of truth and virtue is chiefly occasioned, next to a vicious temper, by a fondness of each one for his party and a slavery to what is most in vogue and fashion, be pleased to tell us

what course we must take to disengage ourselves from this prejudice which is so apt to entangle and bias us? — The directest course to this, good Aristocles, replied he, is for every one to endeavor to possess himself of an habit of the love of human nature, of Christianity, of his country, in general as such, as being what are common to all parties, for by this means he would love everyone not as being of this or that or the other party, opinion, or denomination, but as being a man, a Christian, or at least an Englishman, as partaking of the same rational nature and the same flesh and blood, and as having the same sentiments, passions, and necessities, desires, interests and hopes in common with himself, as being equally allied to the same God and Father, the same Head and Mediator, the same Spirit Sanctifier and Comforter, and equally concerned in the pursuit not only of the same common interests here, but also of the same state of happiness hereafter in which universal, irrespective, impartial love and friendship is forever to reign. For these are your common condition and concerns, and things of vastly greater intrinsic worth and consequence than the things by which you foolishly affect to distinguish yourselves one from another. In this light, therefore, every one should look at every one and be accordingly affected towards him; for this is to treat things as being what they are, and to love or affect things in proportion to the real value of them, which is the great principle on which all that practical conduct which leads to the true genuine happiness of the intelligent nature is founded and wherein indeed it really consists. Every one should therefore thus think and be affected with respect to every other person of a different denomination or persuasion, — “This fellow-Christian, this countryman of mine does indeed differ from me in sentiment with regard to some things of lesser moment, but we are happily agreed in most things and those of the greatest importance. I desire the liberty of him to think in my own way, and to seek my Maker’s favor and acceptance in such a method as to me seems most eligible, without incurring his ill-will, why then should I be disaffected towards him when he desires the same liberty of me. I do deeply compassionate the common frailty of our natures and weakness of our understandings which occasions our not seeing things in the same light. However, since it is so, and that this is no more than what must unavoidably be expected among such imperfect creatures as we are, so far as we have attained to think alike, let us walk by the

same rule and mind the same things, and where we differ let us mutually agree to bear with each other. And we are all agreed in this (or should be) that to love one another notwithstanding, and to be pitiful and courteous, to be kind and benevolent, and to contribute all we can to each other's good and happiness and do nothing to the contrary, are things of much greater consequence in themselves than anything wherein we differ." But then each one of every party considering that their most important common interests are best pursued and secured by union and agreement should in consequence of this, be resolved to agree as far as they can, and be sure not to differ for differing's sake, or from a foolish affection of singularity or of superior wisdom or knowledge or conceited holiness. Every one should study to think alike as far as possible, and all disputes in conversation being animated with love and tenderness, should be directed to the sole view not of victory and triumph, not of establishing or supporting a party as such, but of finding out and propagating truth alone separate from all other considerations, and of being happy under the conduct and guidance of it in all their behavior and actions. For, as I have observed, every good man, as such, is of the party of truth and right, antecedently to any debate or inquiry after them and resolved to follow them alone wherever they lead. Let therefore every one of all parties, whenever they enter upon a conversation on the subjects about which they differ, do it with no other view than mutually to communicate and receive what light they can, and if possible to reconcile themselves together, and not to separate themselves further asunder, or to support themselves each in his cause in opposition to the other, that as each professes truth alone as his aim, they may, if possible, meet together in that as their center, or forever remain resolved not to sacrifice the love of one another, much less of public peace and order, and the great common interests wherein they are all equally concerned, to their several private opinions and party interests.

7. What is mainly wanting in order to this, then, is for us all to be habitually possessed of a deep sense of public good as being of vastly more value to every one than his own private opinions and views, or those of his party, and doubtless could men but keep public good in their eye and be possessed of a strong affection and tendency towards that as being necessary to and of vastly greater

moment than the private good of particular persons and parties, we might hope they would in a brief time drop their party notions and opinions, and in earnest try to reconcile themselves to each other, or so far resign them as to take care that they should not interfere with the good of the whole. That which remains, therefore, is to beg of you to instruct us wherein public good really consists and what tends to promote it, and if possible to fire us with the love of it above all things. But as this, continued I, O venerable Genius, is a subject of so large extent as well as so great importance, that I cannot expect you to do justice to it in this evening's conversation, I most humbly beg the favor of another interview, and the rather because, if it might consist with your pleasure, I should be very glad to introduce a friend of mine into this most instructive and happy conversation to partake with me in the vast satisfaction I enjoy in being thus instructed by you in things of so great moment to the public weal of mankind; for what I find somewhere observed by one of the ancients respecting the contemplation of the beauty and grandeur of the natural world, is no less true with regard to anything that concerns the happiness and welfare of the moral world. "That tho' a man were admitted into Heaven to view the wonderful fabric of the world, and the beauty of the stars, yet what would otherwise be rapture and ecstasy would be but a melancholy amusement if he had not a friend to partake with him in it." So great is the force of the social passions and the happiness attending mutual pleasure! Now I have a friend who has a great sense and love of public good, and tenderly sympathizeth with me in an anxious concern for the weal of our species and our country, and therefore would be vastly delighted with me in partaking of these most important suggestions and instructions which you have to communicate. I will indulge this friendly passion of yours, said he, and willingly admit your friend to be your partner in this conversation and tomorrow morning just at the dawn of the day I will expect him with you at this place. In the meantime, till it grows late in the evening we will go on with the subject we were upon, and recount in general wherein public good consists and the considerations wherewith you may endeavor to fire your countrymen with the love of it. We had ascended the top of the hill and were now in an open space. The sun had been down a considerable time, and very little was left of the twilight. The air continued

very serene, so that the heavens displayed a glorious show of glittering stars, which were just going to be somewhat overpowered by the stronger light of the rising moon, beginning to make her appearance and in a little time shining out in her full large pale majesty when Raphael went on.

8. And in order to understand (said he) wherein public good consists, which implies the public weal and happiness of mankind and what force is connected with it or tends to it, I wish to divide it into two kinds: moral and political. I will begin with moral good, which is the foundation of it, and in order to which it is necessary I should begin with truth, with which they are both in the nature of things connected. For truth, as I have said, is nothing else but things considered as being what they really are, and he is said to know the truth that apprehends things as being what they are, their beings and relations, connections, and dependencies as they stand variously situated one to another. And things are said to be good as they answer their several ends according to their several situations and relations one to another, and as conspiring to the harmony, order, beauty and advantage of the whole, and particularly to the well-being and happiness of the rational nature. Now, therefore, if we would consider things as being what they really are, we must consider them as constituting one entire system, wherein every thing is contrived and adjusted in such a manner by the great Creator and Lord of all, that there is a mutual connection, dependence and subordination of things in regard one to another and to the whole. And this universal system consists of two sorts of beings *toto coelo* different and distinct one from another, and yet in a most wonderful manner connected with one another so as to make one entire system of the universe composed of two great systems entirely different and heterogeneous. The system of intelligent and active beings is called the moral world. And the system of passive and inert sensible beings is called the natural world. The intelligent part of God's creation, for whose sake all other things were made, is his chief care, inasmuch as they bear his own image, being capable of conscious perception, activity and happiness, and consequently of moral government, for which reason they are called the moral world. He being himself absolutely self-sufficient and perfectly happy, his design in giving them being could be no other than the displaying and communication of his goodness to them in order

to render them happy. They being by nature intelligent, free; self-determining agents, their perfection and happiness must consist in their own activity and freely exerting the powers He had given them according to the law of their nature, *i. e.*, according to the truth of things and the just sense of their minds or the right dictates of their understandings. This, God knowing it to be our happiness, is for the same reason his will. And as this our intelligent free activity makes us naturally capable of moral government, it sets us in the relation of subjects to Him that made us, and whose property we are, and therefore He is to be considered as a moral Governor and Lord in regard to us to whom we are therefore accountable for our behavior and conduct. Those affections or actions which are suitable or correspondent to the truth of our intelligent nature as being what we are and so situated as we are, being those which constitute our happiness, are therefore to be considered as the laws of God in regard to us to which it is our bounden duty to yield obedience, whether they be discovered by our own reason or dictated by God himself, and in a free and voluntary conformity to these laws from a sense of duty to Him, consists moral good, and the contrary is moral evil. But besides these for answering certain ends of government, God has generally enacted arbitrary laws and constitutions as proper means of trial, for proof of our obedience, prescribing or forbidding such actions as have not antecedently any natural intrinsic good or evil in them; for it has generally been his method with his intelligent creatures to place them at first in a state and under circumstances of trial and probation, and ever to treat them according as they should conduct themselves; but at all times and under all circumstances the sole end of his dispensations towards them is his inducing and engaging them to a willing and cheerful obedience to those laws and rules in conformity to which their true perfection and happiness and his greatest glory consists.

The begetting in them pleasure or pain in consequence of such actions as tend to their weal or ruin, is the great means of God's maintaining this his moral government over them, and all things or actions are to be considered as natural good or evil in regard to them according as they procure pleasure or pain, so that the great end of natural good or pleasure is to promote or engage their moral good or virtue and obedience, and the sole end of natural evil or

pain is to prevent or cure moral evil or vice and disobedience. All nature therefore, or the whole system of the natural world, was by the allwise and good God contrived, created and suited to the moral world, not only as the great object of and means to direct their activity for attaining pleasure and avoiding pain, but moreover chiefly and ultimately as a great means and engine for the promoting of moral good, *i. e.*, for the securing and engaging them to virtue in obedience to Him, their great lord and moral governor; and is therefore to be considered by them as a sort of language whereby He, their maker and Lord, displays his wisdom, power and goodness and makes Himself and his will known to them and renders them happy or miserable according as they are obedient or disobedient to it. So that by this glorious show of nature, this wonderful, universal, stable language of God to his intelligent creatures, and the pleasures it begets in them, they are taught and obliged to acknowledge, love and adore Him their great creator and benefactor, and like Him be kind and just, true and faithful one to another; and by the pains it produces in them annexed to and in consequence of their contrary conduct, it is designed to show them the great evil and mischief of sin, and to reduce them back to their obedience; and thus far extends the religion of nature strictly so-called. But where this end cannot by this means be sufficiently attained (as in the case of your wayward and inconsiderate race it could not), God has discovered himself and his will in the method of revealed religion, providing another kind of language and means to the purpose of reducing them back and further obliging them to moral practice, and obedience, and moreover to secure to them pardon and acceptance in consequence thereof.

9. Now, from this general sketch of God's moral government of the world you plainly see that if you would consider things as being what they really are, you must consider not only the whole corporeal and sensible, but also the whole intelligent and rational creation, and particularly mankind as being a system wherein all the parts or individuals are so connected one with another as to constitute one great whole under the conduct and management of the one great creator, governor and disposer of all things, and particularly the several members of the moral system, as being so related by the constitution and condition of their natures, not only to Him their common Father and Lord, but also to one another, as

that they cannot act consistent with the truth of things, unless they conduct themselves, both towards Him their head and one another as members of that whole, according as suits their several relations and situations. In such a conduct therefore consists public good of the moral kind as being in the nature of things attended with universal harmony, order, tranquility and joy; and consequently each one's private good cannot be regularly and reasonably enjoyed, *i.e.*, it cannot be really good, unless it be considered with subordination and enjoyed with resignation to the good of the whole. It is therefore upon the public good or the good of the whole that all the eternal rules of righteousness are founded, and according to the truth of things, as God will not break in upon the general laws of the corporeal nature for the sake of any particular conveniences, so neither may these general laws of the rational nature be transgressed by men or any other kind of intelligences, for the sake of any private good whatsoever, which, however, may be sufficiently enjoyed, and is then sincerely enjoyed when we indulge it consistent with and in subordination to that of the whole.

Since, therefore, the interest of virtue and righteousness is the interest and cause of God and what cannot but be dear to Him, it being his own image and likeness and necessary to the happiness of his creatures, it cannot be but that He must reward those that are obedient to his laws and punish those that are disobedient. But because motives from this your present state of probation will in many cases prove insufficient to secure the interest of virtue, it is necessary to take into the account the consideration of your future state of retribution; for that you shall live hereafter and be capable of endless happiness or misery he cannot doubt who considers that your souls are beings of an entirely different nature from your bodies and therefore can't be subject to any corporeal laws and affections, and who withal believes what all nature abundantly teaches, that there is a most wise, righteous and good God, who can't but delight in virtue and righteousness and therefore will make it happy, which, since in fact it is not, and indeed can't be here as things now stand, it must be provided for in a better state hereafter; so that no consistent notion can be formed of your present state, without considering it as only your first entrance into being and a state of childhood, discipline and probation with a view to your being treated hereafter according as you shall have conducted yourselves here.

And finally from what has been said it is apparent that moral obligation to virtue or moral good is the will of God, our creator, and governor, who being absolutely perfect and self-sufficient can have no other end in creating and governing the moral world than the good and happiness of it; and therefore all such affections and actions as, in the whole, are from the nature and truth of things, necessary to the happiness of the rational nature, are the laws of it, and the will of God concerning it; because in willing its happiness, He must will and require all such actions and forbearances, such a conduct and behavior, as is necessary from the constitution of it, to render it a regular, orderly and happy system. And therefore the virtue or moral good of every particular person in the whole moral system must consist in the designed and voluntary conformity of his will and behavior to this will of God our supreme King and moral Governor, *i. e.*, in willing and promoting the general good and happiness of the whole as He does. And consequently, the criterion by which to determine particularly what the will of God is, or what his laws in the government of the moral world are, is the truth of things, *i. e.*, things considered as being what they really are, as tending or not tending to make us, in the whole, ultimately happy, or (which is the same thing) the general good of the whole system, on which depends the weal and happiness of every particular person; which, what it is, and wherein it consists, may be discovered in a good measure and clearly demonstrated by the right use of our reason. The natural obligation to virtue is founded in the necessity that God and nature lays us under to desire and pursue our own happiness. In short, therefore, whatever can be discovered by the clear deductions of right reason to be for the good of the whole moral system as tending in the nature and truth of things to render the rational nature in the whole ultimately happy, that is right, and it is our duty to do it, and the contrary is wrong; that we are obliged to do and the contrary to avoid, as we desire and would expect to be happy, and as being the will and law of God, our great creator, lord and moral governor, whose will and the sole end of whose government and dispensations respecting us, his creatures and subjects, is that we should by this means be ultimately happy.

10. Here the genius intermitted speaking and seeming to expect I should make some observation on what he had been saying

or ask some question upon it, whereupon:—O blessed genius, said, I, do not stop, but go on with this divine lecture, for I am all attention to what you have to offer upon this noble subject, the most important, certainly, that mankind can be entertained with. He then went on to observe from the analogy there is between the natural and moral world that there is the like necessity that all the individuals in the moral and volitional world should resign their private interest to the general good of the whole conformable to the laws of the rational nature in order to jointly conspire to their weal and happiness, as there is in the natural world that all the parts of nature should jointly conspire to the general good of the whole system conformable to the laws of the corporeal nature in order to the beauty and usefulness of it, and if you had nothing else to influence you in this affair, methinks that universal language of nature would be sufficient, which I have once and again been mentioning, wherein the beauty and excellency of all things depend on their mutual subserviency to each other. Look up to this glorious show that now opens to your view, the heavens and heavenly constellations. The sun, we just now lost sight of, with his splendid chorus of planets, several of which have each their attendant satellites, one or more; consider yonder astonishing innumerable multitude of glittering stars of vastly various magnitudes and distances, one mounting still far above another in the boundless abyss of space, not only beyond the utmost reach of your senses though assisted with the best instruments, but even the largest stretch of your imaginations. These are so many suns to their several systems all united by a most mysterious and inconceivable tie of mutual intercourse and dependence, conspiring to constitute one beautiful and unspeakably harmonious system under the conduct, energy and management of one supreme, all-wise, all-comprehending and almighty Spirit, who has made and contrived them for, and suited them to the several tribes, ranks and orders of intelligent creatures, fitted to them, all partaking with you in the same common nature, power and faculties you enjoy, and bound to observe the same common laws of the rational nature, and under the same common care and government and most kind inspection and good providence, you here experience the many beneficent fruits and effects of.

And if you turn your attention especially to this globe destined to be your particular mansion you will see the like plain connection, adjustment and subservience of one thing to another. By means

of its diurnal rotation the sun rises and sets at suitable intervals to give you the agreeable variety of light and darkness, the one for business, the other for rest; the one to open to you the exquisite show of nature in the system about you, and the other to discover the wonderful show of your heavens and constellations and planets above you, *viz.*, the other habitable orbs like yours depending on Him, the common source of light and heat, and the innumerable suns like him designed for the same purpose to other systems. Its annual revolution gives you the grateful variety of the seasons in which you have the pleasing sensation of entertainments and enjoyments suitable to the several parts of the year. The tides actuate and purify your water, and the winds fan and clarify your air, that those elements may be the better qualified for the purposes of the earth and its inhabitants. The vapors arise that they may again descend in plentiful showers to water and refresh your earth, being therewith impregnated, that the earth again may render her tributes in all sorts of plants, flowers and fruits, and that they also may administer pleasure, refreshment and food to the animal world; and of the animal system what a boundless variety is there, all contrived for so many services for the use and benefit of man, the chief and lord of all! Some for food for his support, some for clothing for his preservation, some for labor to assist him in the affairs of life. How exquisitely is the whole system of nature about you fitted to every one of your necessities, occasions and conveniences! How agreeably is your sight feasted with the variety of colors, your hearing with pleasing sounds, your smelling with grateful odors, and your taste with delicious morsels! In short, how exactly and in [. . .] is every thing fitted to all the purposes both of your subsistence, comfort and delight! And lastly what a wonderful machine is that which you carry about you, by which you are enabled to have commerce one with another, and with the external world around you, to exert yourselves in great varieties of motion and activity upon! And to enjoy no less varieties of pleasure and delight from them, the objects on every side environing you! In which system of your bodies how admirably are all the parts suited to each other, and subservient and conspiring to the health, strength and beauty of the whole and fitted to the several purposes of activity wherein you are made and designed to exert yourselves! But it would be endless to recount the innumerable instances wherein it appears how exactly all things

are adapted each to their particular ends and uses among themselves, so as to constitute one beautiful and harmonious whole, and everything in the natural system is no less exquisitely fitted and adjusted to the uses and necessities, conveniences and pleasures of the whole rational and moral system. What I have just touched upon will be sufficient from whence to observe to you that besides the other subordinate uses, such as I have already mentioned, one, and that the chief end of this universal language of nature, is to teach you, even with sensible evidence and demonstration, the doctrine I am upon, *viz.*, how much reason you have to love and adore your great maker, preserver, and benefactor, who does all these things; together with the nature of public good as resulting from the joint conspiring tendency of every particular in his proper station and situation to promote the general weal of the entire system and the necessity of it in order to the good and advantage of every individual whereof it consists.

11. This, said I, is indeed a noble use to be made of the contemplation of nature, and would to God mankind would from hence learn the divine lesson. But there is a great difference between the natural and moral systems; in the one, every thing tends by the necessity of its nature, or rather, being merely passive and inert, it is carried by the perpetual energy of the Author of nature to its particular end and purpose, and to promote the good of the whole, whereas in the other this depends on the designed tendency of exertion of the individuals from a principle of choice and activity within themselves, and the difficulty is to give that its proper determination.

It is very true, replied he, and therefore what I am at in this description of nature is to set before you the example of God himself in the conduct of the natural world as the great pattern you should follow in the conduct of your moral behavior and political affairs, that you may learn from them how you ought on all occasions to determine your choice and actions—that men can never live quietly and peaceably together while they are under the tyranny of ungoverned lusts and passions which will not fail to produce all manner of trouble, mischief, confusion and every evil work. Without counsel, design and free choice there can be no such thing as virtue, for herein does the very essence of virtue consist, that in spite of every temptation to the contrary from private views, we sincerely and freely design to do our duty in all

that we do by a power of such actions and behavior as tends to promote the true weal and happiness of ourselves in conjunction with that of others; and in so doing to do honor to that almighty Being on whom we all depend, whose will it is that we should promote our own and each other's happiness by a constant course of such tempers, actions and behavior as are suitable to our common rational nature, the general interests of it and the several relations we stand in to Him and one another. But the truth is, He has so framed us and put us into such a situation, that if we duly attend to the frame of our nature and what everyone may feel within himself and to the constitution about us which God has made, we shall find something antecedently founded in the nature of things that would mightily contribute to such a determination of our choice. Thus, first in respect to moral good, every man that shall carefully reflect and observe, will readily find that there are some things and actions that he calls good as being attended with pleasure and complacency, and others that he calls evil as being attended with pain and uneasiness; that of these some are less, others greater goods or evils as tending to make him less or more happy or miserable; some are sensible and others spiritual according as they belong to his sensitive or rational nature; some are private and others public according as they relate either to himself alone, or to the whole community to which he belongs; some are near and others distant, some present and others future according as they relate to the present or future state of his existence. Again, whoever reflects and compares his senses, appetites and affections, which he has in common with inferior animals, with the vastly more noble powers of thinking and reasoning, can't but be sensible that his reason is designed to be the governing power in him, and the great law of his nature as being what he is, whereby he can make an estimate between less and greater, sensible and spiritual, private and public, present and future goods or evils, and that he is at liberty which to choose or refuse, pursue or avoid; that in all reason as a greater good is to be preferred before a less, and a lesser evil before a greater; so, as much as the soul is of more value than the body, the interest of all mankind than that of one man, and eternity than time, so much should spiritual and moral good be preferred before sensible, public before private and a greater distant future good before a lesser that is present and near; and that in all cases it

is most reasonable to undergo a less evil to escape a greater; sensible, to escape spiritual; private, to avoid public; and temporal, to secure against that which is eternal; that his reason being evidently given him to be the governing power, to preside over and direct all his senses, appetites, affections and actions, it is therefore his duty to govern himself according to its dictates; and that he has accordingly a tendency to be governed by it at least till he has mastered that good tendency by contracting contrary habits in consequence of a course of action repugnant thereto, and that he can never gain this mastery over the dictates of his reason and conscience but at the expense of a mighty struggle which is attended with a great deal of uneasiness, horror, remorse, shame and fearful expectations, while he persists to act in a direct contradiction to the sense of his own mind and is thus wretchedly inconsistent with himself; a state as unnatural to the soul as wounds, fractures and dislocations are to the body. He must therefore conclude, that if he would consult his true happiness, his reason must not be thwarted by actions repugnant to the dictates of it, but must be carefully attended to in all that he does as the law of his nature, and that nothing must be affected, chosen, or embraced, nothing must be indulged or practiced, which that forbids, since he can find no true ease in a course of life inconsistent therewith and in opposition thereto; and hence would spring all the virtues of temperance, moderation, patience, and meekness, all which virtues have a natural tendency not only to the tranquility of each mind, but also of society, forasmuch as ungoverned lusts and passions tend to public mischief.

12. Again, every one that exercises a little reflection will readily find that he is upon many accounts a limited dependent being, that he is every moment affected by various impressions and sensations that do not at all depend upon his power, that, if his organs be in a proper disposition for it, he can't avoid seeing light and colors, hearing a diversity of sounds, smelling various odors, tasting diverse savors, feeling a great variety of tangible qualities, in all which he is merely passive, and must therefore in all these be continually acted upon by some powerful active being, who both perfectly knows his frame and is able thus continually to affect him in this endlessly various manner producing in him a vast variety of pleasures or pains according as the objects he is affected with are agreeable or disagreeable to him; on whom therefore he can't but

feel himself entirely dependent. From the wonderful wisdom and contrivance and adjustment that is obviously discernable in the whole system of sensible things about him, he can't but conclude the all-powerful author of them to be infinitely knowing, wise and good. He can moreover easily imagine many pleasures and agreeable objects which it is not in his power to possess himself of, and is many times attended with diverse disagreeable objects and pains which it is not in his power to free himself from. Now these and the like obvious apprehensions duly attended to will directly lead to the greatest veneration towards that all-wise and almighty Being on whom he finds himself thus depending, to love and praise Him for all the pleasures he enjoys, to pray to Him for the bestowment of everything agreeable that he wants or desires, and for deliverance from everything painful that he feels or fears, and to be patiently resigned to his all-wise and uncontrollable disposal in all that occurs to him. He must know that whatever powers he finds himself furnished with, such as sensation, reason, liberty, activity and so forth, he was not the author of to himself, but must derive them from a being who is himself possessed of these without limitation or imperfection, nor can he continue himself a moment in the exercise of them, but as he received so he holds them of Him who gave him being, whose therefore he is and to whom he must be accountable in what manner he employs them; he must therefore conclude it his highest perfection and true end, that he exert and employ them in such a manner as He that gave them designed he should, and it can't be but that He who is himself perfectly holy righteous and benevolent, the absolute rectitude of whose nature must determine Him always to treat everything as being what it is, should design that his intelligent creatures should imitate Him herein, consulting the general good of the whole as He does, and in so doing be conformed to the moral perfections of his nature; who is their great original and pattern. Thus, I say, did not men strangely besot themselves, and would they but give themselves leave to think and reflect they would readily find themselves lead to acknowledge, love, fear, trust in, submit to, adore and imitate that glorious Being on whom they depend as their Almighty Maker, Preserver and Governor, all which actions also have a direct tendency not only to the inward peace and satisfaction of each one's mind in particular, but also to the general weal of society, for as

much as a deep sense of the Supreme Being tends to keep in awe and hold together.

13. And last, every one, if he looks about him and considers, will obviously find the whole system of mankind to be so constituted as renders them on many accounts unavoidably dependent on one another for their mutual well being and happiness, as well as on Him their common Father and Lord, since in many cases they cannot do without each other's help and according as they use or abuse their rational and active powers in their conduct one towards another they are capable of doing one another a great deal of good or hurt, and by that reflecting and imagining power with which the rational nature is endued, every person is readily carried to imagine himself in the same condition in which he beholds another and by conceiving how he should expect or desire to be treated by others were the case changed, he must readily apprehend how he ought in all cases to treat others himself, because he could have no right to expect from others such treatment as he himself would naturally wish for, if he did not allow it to others in the like circumstances. Thus, [. . .] inasmuch as every man has a right to call those things his own which he is possessed of by the free gift of his Maker or has acquired by his own activity and industry and that they are highly useful to his comfort and well-being, he feels a great pleasure and satisfaction in the unmolested enjoyment of them and consequently a great uneasiness and trouble in being deprived of them. Hence he must find a strong sense of injury if he be molested or abused by others in the enjoyment of what he has, and must therefore conclude that others have as strong a sense of injury in the like case as he. This sense therefore must determine him not to do injuries to others as he would not receive any from them. He knows that he abhors to be hurt, robbed, belied, deceived, etc., and consequently since everyone must hate to be thus ill-treated as well as he, he must conclude it wrong to treat others ill in these or any the like instances, since he would not endure to be treated so himself. For the same reason therefore that he thinks it right that every one should allow him his own and treat him as being what he is and has, he must be determined to consider it as his duty and interest so to treat others. Again, every man feels a great delight in being well respected, duly valued, well-spoken of and kindly treated by others, and must therefore be led to treat

others with all such acts and instances of kindness and benevolence as he would himself, in the like case, expect and take pleasure in receiving; and every one finds a great solace under pain and distress in the pity, compassion and assistance of others, and must therefore feel within himself sentiments of compassion and tenderness towards them in the like circumstances and would act unnaturally if he did not contribute all he could, consistent with his other obligations, to their ease and relief. Thus by means of this faculty of reflecting and conceiving ourselves in each other's case, our love of our selves becomes the foundation of our love of others, and of all the social passions by which we are so readily carried to yield to each one his due, to have mutual pleasure in each other's enjoyments, and mutual sympathy and fellow-feeling in each other's calamities, to take pleasure in communicating pleasure to them, and in relieving their pains, and being solicitous for them in their misfortunes; and hence spring all the social virtues of justice, truth, faithfulness, kindness and benevolence, mercy and charity, all which are in the nature of things necessary to public peace and order since the contrary necessarily lead to all manner of confusion and mischief.

14. Furthermore with regard to political good it is sufficiently obvious to every one that will with the least attention consider the general condition of mankind, that every man is liable to more wants and necessities than he could of himself supply without the assistance of others, and that there are abundances of the advantages and conveniences of life which cannot be provided for without the joint concurrences of many heads and hands, and the joint commerce of many and even distant nations, God having so ordered things that each different climate should produce some things peculiar to itself, which necessitates every country to have commerce with every other country, more or less, and this seems designed on purpose to promote a general acquaintance, intercourse, faith and friendship among mankind; so that all the inhabitants of the whole globe are obliged to consider themselves on many accounts as one community, throughout the whole of which it is plain that no man could be provided with the necessities and conveniences of life independent of his neighbors and the rest of mankind; hence derives the necessity of universal activity and industry, of various arts and trades and traffic with other nations,

and hence buying, selling, and exchanging commodities. And as there are thus various businesses and occupations needful for the general good, so God hath given men no less various geniuses and different turns of mind, and endowed them with a wonderful diversity of faculties and inclinations; by all which, however, differing one from another, it is evident they are designed and in the best manner fitted to promote not only each one his own, but withal, every one the general good of the whole. Thus therefore while each one considers himself as depending on one neighbor for one sort of food, on another for another; on one for clothing of one kind, and on another for that of another; on one for conveniency of habitation; on another for conveniencies of furniture and utensils; on one for furnishing him with these things from home, and on another for supplying him with them by trade and commerce from abroad; on one for curing the maladies of his body; and on another for instructing and cultivating his mind; on one profession for pleading his cause and maintaining and defending his rights with respect to the things of this life, and on another to assist him in fitting himself for, and securing to himself the enjoyments of the everlasting happiness of the life to come; I say, while every one considers himself in this dependent situation with respect to the rest of his fellow-mortals; as dear as each and every of these several enjoyments and conveniencies of life are to him, so dear must the good and flourishing condition of each and every kind of business and profession be in his eye, and consequently he must be solicitous for the weal and prosperity of every one else in order to that of his own. I might add here that the condition of mankind being such that they cannot be subsisted and propagated without marriages and affinities, whence spring divers relations, natural affections and particular friendships and tendencies towards each other, which in addition to the other things above mentioned do strongly tend to bind them together and oblige them to the performance of divers relative duties; and lastly since the love of your children and care for posterity is one of your strongest passions, and since their happiness must chiefly depend upon the good order, weal and prosperity of your country with which you leave them when you go off the stage; this passion, one would think, can't but have a mighty force to engage every one to do all that he can to promote its general interests and public weal while he continues in it.

15. It is therefore manifest that the great Author of your beings, by all these common sentiments, necessities and interests, affections, relations and dependencies, has evidently designed to tie you together and lay you under a necessity of considering yourselves as a system or whole made up of a vast number and diversity of members, connected together in such a manner, that no one with any pretense to true wisdom can propose his own real interest, his own good and happiness, without being at the same time solicitous for the weal and advantage of every other person that is at all useful in any kind of business whatsoever. And that he that does not contrive to make himself somehow useful to the rest of his species, in proportion to his abilities and opportunities, is like a drone among the bees, a common nuisance to them, and forfeits the good will of the rest, and even the common rights of society, and deserves to be banished from among mankind. And much more he that goes into any course of life, into any vicious and mischievous practices that tend to the subversion of truth and right, of peace and order among mankind. And this leads me to add that whoever shall attentively consider the dark, weak, and depraved condition of mankind among whom the greatest part are generally so intent upon their own private good, their pleasures, profits and ambitious views, as for the sake of them to break through the eternal laws of righteousness and equity, in conformity to which the public good consists; whence many irregularities, disorders and public mischiefs can't but derive; and whoever shall withal consider the nature of mankind as being chiefly influenced by their hopes and fears; not only on their fears of punishment in consequence of their mischievous practices, but also on their hope of reward attending their virtuous behavior and usefulness, and that therefore those things that are necessary for promoting the public weal, such as profitable discoveries and inventions, arts, learning, and industry cannot flourish without public and honorable encouragement; I say, whoever shall duly consider these things must be readily convinced of the necessity of their subsisting under some form of government and under some sort of public agreements and compacts for maintaining of order and promoting public good according as they are divided and cantoned out into various nations and countries. In order to this some public rules or laws must be agreed upon and established in each particular community by which those things that are dis-

covered to be for public good are commanded and the contrary are forbidden; to which laws sanctions must be annexed. The virtuous, the lovers of their country and those who have by any singular good services promoted the weal of it must be amply rewarded, and the vicious, the profligate and the mischievous must be severely punished. It is necessary to this end that the laws be duly executed, and in order to this there must be magistrates, and a various subordination of officers, all thoroughly furnished with the knowledge and inspired with the hearty love of public good, and unanimously conspiring in their several stations to promote it. Every one's duty and business must be assigned him according to their several ranks, orders and situations in the community, and the public expenses must be honorably provided for. Without such constitutions, laws and administrations as these, and the same duly revered, observed and obeyed, society would be a mere chaos and confusion. And lastly it is not only necessary that every community be thus provided for with means and methods for public order within itself; but it must also, from what was above observed, consider itself according as it stands variously situated in regard to other nations and countries, with which it must take care to secure its honor and interest by honorable treaties and stipulations and courageously defend itself when its honor is at any time trampled upon or its rights invaded. Many different forms of government have been devised and practised among mankind, but it may be truly said that none have ever been contrived to better advantage than that of your own nation, by which the people are abundantly secured in the enjoyment of their just liberties and properties, and in a manner sufficiently secure to the honor and dignity of government; and you can't be so happy here in any other method as in that of a firm attachment to the constitution of your mother country, and a submissive conduct towards it, in the welfare whereof and your dependence on it your own is bound up.

But after all no method or form of government can answer the ends of preserving good order and securing the public weal, without a spirit of public virtue and integrity, without a deep sense and hearty love of public good as such, and a sincere, joint, unanimous endeavor in all ranks, orders and conditions of men in their several stations and capacities to promote it, and that in spite of every temptation from any private views whatsoever. And therefore this

truly divine temper, this excellent spirit and conduct is by all means to be inculcated, studied and promoted. And to this purpose I will only add here that nothing can so much tend to this as a deep sense of religion that must by all means be provided for; as you are made for a twofold state, a state of probation here and a state of retribution hereafter, provision must be made for securing your general weal in both respects. And as the former is in order to the latter, and the latter is of vastly the greatest importance to you, it concerns everyone that would study the true interest of mankind to consider things in this light and consequently how necessary it is that the public order, peace and weal of mankind respecting the present state be the more solicitously sought, that they may be under the better advantage to qualify themselves for a better state hereafter. And as God being especially intent upon the future weal of his creatures has granted them a particular revelation of His will with respect to that, their most important interest, and hath appointed an order of men to explain and enforce it; and inasmuch as the religion he hath taught and enjoined is on all accounts most friendly and advantageous to promote the temporal and political weal of mankind as well as their spiritual and eternal happiness; it ought to be a necessary article in true political wisdom to protect, encourage and honorably treat this revealed religion and the dispensers of it; for nothing can so effectually secure both fidelity and integrity in the magistrate and obedience and good order in the people as the excellent qualities and salutary effects which it is the design and tendency of the Gospel to produce in your hearts and lives.

16. You have, said I, O happy genius, in a little compass set the principles and foundations of moral and political philosophy in a very clear and pleasing light, and showed how they are in the nature of things connected one with another. Nothing strikes my imagination with so noble a pleasure as the contemplation of the order, harmony and beauty of both the natural and moral world as arising from this joint tendency and unanimous conspiring endeavor of each part and member to contribute the part assigned it, towards the good and advantage of the entire system, and every one's seeking his own good in the general good of the whole. This makes me always charmed with the most elegant description our divine apostle St. Paul gives of this matter in one of his Epistles, though

applied to a particular case. His simile is taken from the natural body and applied to the church, but is equally applicable to the state, and contains a summary of what you have been giving a more particular account of. "The body," says he, "is one and hath many members, but every member hath not the same office. For the body is not one member but many. If the foot shall say, because I am not the hand I am not of the body, is it therefore not of the body? And if the ear shall say, because I am not the eye I am not of the body, is it therefore not of the body? If the whole body were eye where were the hearing? And if the whole were hearing, where were the smelling? But now God hath set the members every one in the body as it hath pleased him, and if they were all one member, where were the body? But now they are many members and yet but one body: so that the eye cannot say to the hand I have no need of thee: nor the hand to the feet I have no need of you. Nay even those members that seem to be most feeble are necessary. And God hath so contrived the body that there should be no division and that the members should have the same care one of another, so that if one member suffer all the members suffer with it, or if one member be honored all the members rejoice with it." And a little after he gives a most beautiful description of that spirit which should animate all the members of the moral world, diffused throughout the whole, analogous to the soul in the animal body or to what we call attraction in the natural world, I mean that divine spirit of charity, the great principle of this union and universal tendency to the good of the whole. "Charity," says he, "suffereth long and is kind, charity envieth not, charity vaunteth not itself, is not puffed up, doth not behave itself unseemly, seeketh not her own, is not easily provoked, thinketh no evil, rejoiceth not in iniquity, but rejoiceth in the truth, beareth all things, believeth all things, hopeth all things, endureth all things and charity never faileth." This is that wisdom which is from above, "which," says another Apostle, "is first pure then peaceable, gentle, easy to be entreated, full of mercy and good fruits, without particularity and without hypocrisy." And conformable to this, St. Paul sums up the whole of our duty and concern, "whatsoever things are true, says he, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue, if there be any praise, think on these things."

Strange it is when we have such excellent instructions we should so little regard them!

These descriptions, said Raphael, are indeed truly amiable and worthy of those whose business it was to promote pure religion and undefiled, and to establish the cause and kingdom of God in the world. And strange it is, indeed, that men should be no more charmed with them and governed by them! For to see a company of intelligent creatures, all seeking each one his own particular humor, taking each one his several way, and serving each one his own base lusts and private interests, in spite of every one else, and in opposition to the interests of all the rest; without any regard either to the good of one another or of the whole community of them all, or to the will of their great Head, Lord and Sovereign; without regard to the inspection of his all-seeing eye, or the supreme dominion of his almighty providence, or the great account to be rendered to Him at last: this is indeed a horrid prospect! a most ugly, deformed and hateful sight! Whereas, on the other hand, to behold a regular system of rational beings, every one inflexibly resolved to be governed by his reason as the great law of his nature and the will of God and consequently to indulge no lust, to pursue no gratification, to serve no interest, that his reason and conscience forbids as trespassing upon the general rights and public weal and the unchangeable laws of righteousness and benevolence founded thereon; all tendering the good of every one as his own, and every one loving every one as himself; all conspiring each one in his several station and capacity to promote the weal and interest of the whole community to which he belongs, as that in which his own particular good, and that of his friends and family and posterity is entirely bound up and on which it depends; and cheerfully sacrificing all his private and personal views and aims, whether at pleasures, profits or honors, whereinsoever they are at all inconsistent therewith; all thus treating every person and thing according to what it really is, and the relations it bears to the whole system, and all ever thinking, affecting and acting as in the presence and under the eye inspection and conduct of the all-seeing, all-wise and almighty governor of the world, who hates vice and wickedness with a perfect hatred and loves virtue and righteousness as his own image and the rays of his own divinity, and who will not fail in the final result of his dispensations to see the one punished with the utmost severity, and the

other rewarded with endless and inconceivable happiness; all considering themselves accordingly as accountable to Him for all their behavior, and therefore studying to imitate and please Him in all that they do, jointly worshipping and adoring Him as their great benefactor and sovereign Lord, praising Him for every thing they enjoy, and praying to Him for every thing they want; all thus designedly conspiring to constitute one orderly regular system animated with universal righteousness and benevolence as the life and soul of the whole, and to promote the good and weal of the whole, not only as their own interest, but as the interest and cause of God, the great Father of Spirits, the Head and Lord of all, whose greatest glory is the universal harmony good order and happiness of his whole rational creation; this, I say, is a most beautiful and amiable prospect! This is a truly glorious and heavenly light! This is the delight of God and the joy of angels! This I can assure you is the foundation and source of all our happiness in the blessed regions above! Such is our manner of life and all the social and divine felicity we enjoy entirely consists in it and derives from it!—This therefore, is the only course you can take, not only for your present weal, but also to qualify yourselves to be partakers with us at last in the consummate felicities of those heavenly mansions where we dwell, and as sure as you improve your selves in all these reasonable, divine, social and political virtues, so sure will you be at length translated from bearing a part in this city and kingdom of God on earth to the heavenly city, the New Jerusalem, the triumphant Kingdom of God above, consisting of an innumerable company of angels and spirits of just men made perfect, under the one universal dominion of Jesus, the Mediator of the New Covenant, and God, the Judge of all!

For this I assure you is a faint description of the life we lead, every one conspiring together in promoting and rejoicing in every good happiness and joy and in the universal weal and felicity of the whole great family and household of God both in heaven and earth, and this in imitation of Him, our Father and Lord, who has taught us this divine lesson in the whole structure and contrivance of the natural world and in adjusting it to the subsistence, necessities, conveniences and delights of the moral world, and in suiting the several faculties, dispositions, relations and interests of the several individuals in the moral world one to another among themselves, so as to make the whole a beautiful, orderly and well-

connected system. I hope, therefore, you will study to imitate our example and with us to imitate God our common Father; for this is the only sure course you can take to prevent all the miseries attending the contrary temper and conduct which your own sad experience if there were nothing else, one would think, would be abundantly sufficient to convince you of the mischief and perniciousness of. For whence come wars and bloodshed, rapines and devastations, the innumerable mischiefs of civil rage and tumult? Whence come tyranny and cruelty on the one hand or anarchy, confusion and the utter dissolution of all that is orderly and good in society, on the other? Whence injustice and violence, oppression and knavery, dissimulation and hypocrisy, yea whence poverty and disgrace sickness and untimely death? I say whence come these and all the innumerable train of mischiefs and miseries that many times make a very hell upon earth, but from the tyranny of impetuous, insatiable lusts and furious passions, and the want of piety, justice, benevolence, charity and the hearty love and study of public good. These are the things that precipitate you headlong into all the miseries of life, and fit you for nothing but the company of infernal furies and endless perdition in the future state. But I have done for the present and here put an end to this evening's conversation and tomorrow morning, said he, Aristocles, at the first dawn of the day, I will expect you here again with your friend whom you mentioned, that I may go on with the design I am upon and suggest several other particulars of great importance for promoting the weal of your country. It is impossible, said I, sufficiently to express how much I am obliged to you for this great favor in condescending thus familiarly to converse with me upon these great and important subjects, which I shall make all the good use of I can, for promoting in myself and countrymen what may tend to advance our greatest interest, and true happiness, both here and hereafter; and with these words I humbly took my leave.

PART II

I. You will not doubt, dear Crito, but that it was an unspeakable satisfaction in my return home after such an intercourse and conversation with so extraordinary a person, and that it could indeed be little less than rapture to me to reflect on the honor that was done me by this heavenly Genius, and the good that I flattered

myself I should do my country by communicating his excellent instructions. I was even tempted to long for wings to waft me with the greater dispatch to the house of our friend, Publicola, that I might communicate to him what had occurred to me. And it was not long before I was with him and found him reading Plato's *Republic*, with several others of the best writers of antiquity about him, upon moral and political subjects. His thoughtful and benevolent countenance discovered his mind to be laboring with thoughts and projects for the good of his country. But as soon as he saw me he dropped his serious look, and embracing me said with a cheerful air, what joy and gaiety is this, Aristocles, that sits so brisk upon your countenance? O my friend, Publicola, said I, had you been with me this evening you would scarcely have known whether you were in the body or out of it; for I have been taking a walk in the pleasant groves where you and I have spent so many agreeable hours, and was deigned a visit by a heavenly genius who was pleased to let me know that he was the genius of the country, and came to communicate several things of the greatest importance for the public good and welfare of it. Publicola was astonished and thought at first I raved, and I had much ado to convince him that I was in earnest and in my right mind, which when I had at length done, he was extremely impatient to know what had passed between us. I then recounted to him the whole conversation as above related, and let him know that I had leave of the genius to wait upon him again and to take him with me, and that we were to attend him tomorrow morning at the dawn of the day. O blessed morning, said he, in a kind of ecstasy, hasten on with speed on the wings of time; I shall scarce have patience to sleep till it arrive. We spent an hour or more upon this our beloved subject, the beauty of a regular moral system, the study of public good and the extraordinary conversation I had been entertained with and then took our leave, with a resolution to be ready together with the dawning day at the place appointed to attend on our heavenly genius.

II. I soon went to bed when I came home, but my imagination was so strongly affected with the pleasing and extraordinary converse I had had, that it was a long time before I got to sleep, and after my perceptions to the external world were at last bound up with sleep, I found my imagination yet awake which could not be refrained from entertaining itself still with Raphael and the pleas-

ing subject of our conversation. And that he might the more effectually impress my mind with a sense of what he had been upon, I thought he gave me a slight touch with his hand, and no sooner had he bid me follow him, than we were directly mounted together in the air, and with a swiftness inconceivable, wafted over mountains, hills and dales, cities, woods and meadows, rivers, seas and plains, till at length we arrived at the blessed Elysian Fields; where he showed me an innumerable company of pure and virtuous souls of several different ages and countries, pointing them out to me one after another, and describing them severally according to the several characters given of them by the writers of antiquity; each one entertained with their various different enjoyments and felicities apportioned to them as the rewards of their virtues and good deeds whereby they had in their several ages deserved well of mankind and their countries. And when he had thus described them to me, here you see, good Aristocles, said he, the happy fruits and glorious rewards of public virtue and what it is to do good to your country and be publicly and extensively useful in the world! I was extremely surprised and delighted with what I beheld, and immediately bethought myself of Vergil's Aeneas taking a view of these happy abodes, and fell to repeating the verses he has upon that occasion:—

Hic manus ob patriam pugnando vulnera passi:
Quique sacerdotes casti dum vita manebat:
Quique pii vates et phoebo digna locuti:
Inventas aut qui vitam existuere per artes:
Quique sui memores alias fecere merendo:
Omnibus his nivea cinguntur tempora vitta.

With these words I awaked, and directly started up and made what haste I could to Publicola, concluding it to be near the time appointed to attend our assignation. I found him also risen and preparing for our walk. While he was getting ready, I gave him an account of the agreeable dream I had just awaked out of and how much I was pleased with it. He said it was a pity I had not continued a little longer in it; for then I might probably have had opportunity to take a view of the condition of those of a contrary character suffering the punishments of their several vices; and then he repeated the description Virgil gives of them and their wretched state.

Vendidit hic auro patriam, Dominumque potentem
Imposuit; fixit leges praetio atque refixit:
Hic thalamum invasit natea, vetitosque hymenaeos
Ausì omnes immane nefas, ausoque potiti.
Non, mihi si linguae centum, sint oraque centum,
Ferreæ vox, omnes scelerum comprehendere formas,
Omnia poenarum percurrere nomina possim.
Discita justitiam moniti, et non temnere Divos!

III. It was not long before we betook ourselves to our walk, and as we went along Publicola was inquisitive about the manner of the Genius in conversing, and what kind of deportment he would expect. I told him that he treated me with all imaginable candor and tenderness, and expected no other deportment from us towards him than such as is esteemed decent and respectful among men. But Publicola could not conceal a very considerable degree of awe and concern in his mind from the reflection that he was in a little time to see and converse with an intelligence of that superior nature and dignity. And indeed he could not forbear expressing his apprehensions that he should be in danger of being much at a loss how to conduct in the presence of such a being. I told him, whatever concern his mind labored under on that account, I was well assured it would soon wear off when he should have opportunity to experience with how much freedom, benevolence and courtesy our Genius would converse with us. We had a fine morning and a very clear air with a small breeze; the trees, shrubs and grass were dripping with a plentiful dew, and the flowers were ready to unfold themselves that they might display their various inimitable beauties, and shed abroad their delicious odors to welcome the rising sun; all nature seemed waking and the birds began to tune their pleasing notes. The sky glowed with a fine show of stars, and all the constellations seemed to glitter their congratulations to the arrival of this happy morning. The moon was just setting and the day led on by the morning star began to break with the light beaming out of the east, when we arrived at our wonted groves. It was a broad plain and much beaten road with thickets and young wood on each hand, that brought us to them and we were just going to turn out of it into a final path which led into them, when we beheld Raphael at a distance with a slow step coming towards us. We both approached him with ceremonies of the deepest reverence when he

spoke and said, Is this your friend, Aristocles, whom you told me of? This, said I, is my friend Publicola. I pray God bless him, said he, and make you both useful to promote the weal and best interest of your country! Publicola replied, I am unspeakably obliged to you, most venerable genius, that you were pleased to admit me to be partaker with this my friend of the advantage of your instructions. You have done us and our country the greatest honor and favor in condescending thus kindly and familiarly to instruct us in those things that may contribute to its public weal. This, said Raphael, is the business upon which I am employed and I conclude your friend hath informed you what progress I made in discoursing on the nature of public good, and the great incentives by which all should be wrought upon and engaged in promoting it. These things therefore I shall not repeat, but shall go on to treat on sundry particulars of great moment that are more especially necessary to be insisted on and inculcated in order to promote the common good and best interest of this country — and I will begin with that which should naturally employ every man's first and tenderest concern, and one of the chiefest things that should demand the care of those that would study the public good of mankind: I mean the education of youth.

IV. This, said Publicola, is indeed a subject of very great importance, it being the foundation of all that is good or evil in a country, according as it is well or ill managed. It is so, said the Genius, and therefore it is an affair about which it concerns people to be vastly solicitous, and to neglect their duty respecting it is, in truth, a most unnatural piece of cruelty and barbarity. And yet it is a foolish fondness of seeming tenderness that is usually the occasion of most of the miscarriages attending it. Necessary therefore it is that parents should have a very jealous eye over that weak fondness of theirs and obstinately resist it as a violent temptation to them to yield indulgence to the little perverse humors of their tender offspring, which if they do not they will be in danger of proving in effect rather their destroyers and murderers than their kind nurses and guardians; and let them consider what a terrible account they will have to give of the important charge they are entrusted with if through their own foolish indulgence and mismanagement their dearest offspring are ruined. Now as there are three things which are chiefly the foundation of all that is

virtuous, good and orderly among mankind, *viz.*, obedience to laws and authority, self-denial and industry, these therefore must especially be taken care of in the education of youth. The first and principal care in the education of a child should be to establish your authority over him by inflexibly insisting on reverence and obedience and therefore it is best never to require anything of him but when you intend to be peremptorily obeyed, for if you are lax and negligent in some things and at some times, he will soon expect you should be so on other occasions and always, and this will in a little time grow into an habit of disobedience. You should therefore take care to command nothing rashly and unadvisedly, nothing but what is reasonable, fit, and just, but when you have declared your will see that it be ever immediately and punctually obeyed, and let him always feel the comfort, the pleasure and advantage of an orderly, regular and obedient behavior, and let pain, shame and disgrace ever attend the contrary. And if he be thus always habitually inured by a steady conduct from the beginning to an invariable obedience and submission to government this will render all your other endeavors to promote his good the more easy and successful and withal prepare him when he goes from under your care to act for himself, to be an orderly, obedient and well behaved member of the community. This, said Publicola, is what indeed needs to be much inculcated among us, for family government is grossly neglected in the country and this neglect is such a growing evil, that if it be not reformed in a little time, our youth will be utterly ruined and our commonwealth will sink into a confused jumble of untoward and ungoverned rebels.

V. It is no less necessary, said he, that this authority be chiefly asserted in the early practice of accustoming them to have their desires curbed, their appetites restrained, and their inclinations thwarted, for the chief occasion of stubborn, vicious habits taking early root in tender minds is their not having resolution enough to deny themselves anything they have a mind to; which when it comes to an habit, they are ready to stick at nothing however so impious or injurious that stands in the way of their gratification. If therefore you would have children virtuous, you must teach them early to deny themselves, and in order to this you must make their inclinations and appetites tame and pliable by accustoming them betimes to be easily denied and crossed. Nay you should even deny and cross them however so innocent a thing it is they desire, when-

ever they discover an impetuous strong and impatient inclination towards it; for though the thing itself be ever so small and inconsiderable, yet custom, the custom of being indulged on all occasions, is a great thing and draws after it a pernicious train of evil consequences. And if they have been used to have their little senses and innocent inclinations always indulged while they are young they will contract such an habit as will violently prompt them to insist on the gratification of their basest appetites and most vicious inclinations when they grow up. Let them therefore by all means be inured to self-denial, for on the other hand, if they have been used to this in obedience to your will while young, they will readily practice it in obedience to the will of God and the public will, the laws and government you leave them under when they come to be adult. Of the necessity of this precept, said Publicola, we have abundant sad and deplorable evidence! When it is obvious that our youth are apace running headlong into all sorts of debauchery and uncontrolled indulgences, which I doubt not is, as you observe, chiefly owing to the fond indulgence of their parents, and their bad examples in their tender years, while they allow them every thing they ask, and deny them nothing they desire, and study to please and humor them, and even make bargains with them to purchase their obedience to their wills in some things at the expense of letting them have their own wills in every thing else! This, said Raphael, is indeed a most ruinous method of managing children; but I would further add, continued he, upon your mentioning their parents' example, that it is a thing of the greatest importance that parents not only early teach them the utmost abhorrence of all impurity, but also keep a strict watch over all their own words and behavior especially in the presence of their children; for there is nothing that they are so apt to be wrought upon and influenced by as the example of their parents, whether good or bad. They should therefore consider the notice and observation of their children as a strong obligation on them in addition to every other consideration, to take the strictest care of their own conduct that all their words and behavior be not only innocent and remote from everything impious, vicious and impure, but as exactly decent, virtuous and religious as possible. For it will be not only the greatest misfortune to them here to have their children take vicious courses, but also a prodigious aggravation to their punishment hereafter, when by their vices they have precipitated themselves into a state

of endless misery and despair, that they have by their ill examples brought their miserable offspring into the like deplorable condition. Whereas on the contrary it must vastly add to their felicity and glory in the future state if they have by their good instructions and examples trained them up to be companions and partners with them in the endless felicities of the blessed abodes. These, said Publicola, are indeed the most moving considerations that can be suggested and would to God all parents would duly consider them lest for want of so doing they finally make both themselves and their children miserable in both worlds!

VI. To prevent this, said the Genius, their next care should be to keep a strict eye over them, not only to prevent them from contracting vicious habits, but also when they observe them to be in danger of it, early to reclaim them by seasonable and serious admonitions and if need be, by severe reproofs and corrections. To this purpose it may be highly useful to take them alone and in a serious and dispassionate manner explain to them the mischief of any ill courses they are in danger of. And then carefully endeavor to keep them out of the way of temptation, particularly darkness and unseasonable hours of the night being the most tempting opportunities for wicked practices, let them always insist upon it that their children be at home in season and keep good hours; and since bad company is very contagious let them take care what company they keep and see that it be such as is virtuous and orderly; and lastly forasmuch as idleness is a state of perpetual temptation let them inure them to a steady course of industry, for youth are generally very active, and activity if it be rightly employed is the true perfection of the rational nature, as on the other hand if it be employed to bad purposes, it is its greatest deprivation and misery. It is therefore indispensably necessary that they be both inured to industry and diligence, and always steadily employed about something that may turn to good account; for since everything that renders mankind comfortable and happy depends upon activity and diligence in some business or other, it is absolutely necessary that youth be trained up in some steady course of business in order that they may become useful members of the commonwealth, profitable to themselves and all about them. And since your present state is unavoidably attended with many hardships, the best way to qualify them to pass successfully through

the world is to inure them betimes to care, pains, labor and hardship; and besides, a lazy, idle, sauntering negligence, a trifling, luxurious, effeminate softness, are such wretched habits as can't but be attended with a numerous train of odious and pernicious consequences, particularly gaming, intemperance and lewdness, those deadly bairs of youth, and almost unavoidable attendants of idleness. For youth as I have said, are naturally active, and if their activity be not rightly turned and well employed it will be apt to find employments of one pernicious kind or other, and temptations to gaming, drinking and lewdness are always in their way, and almost sure to take hold of them, and greater mischiefs can scarce befall them. Gaming, particularly, is a most powerful temptation to the wasting and consumption of that precious talent, time, which might be employed to the best purposes of ripening and improving either their bodies by such manly exercises as would preserve their health and increase their strength and activity, or their minds by reading histories and other books, which while they enrich them with true and solid wisdom would at the same time give them a vastly more rational, manly and agreeable diversion; and by these means they would prevent a vast deal of quarrelling, swearing, cursing and other hateful vices and mischiefs which generally attend this pernicious practice of gaming. And then as to intemperance and lewdness, besides that they as well as gaming are very expensive and consequently ruinous to their estates, they weaken and enervate all the powers of soul and body; they darken, debilitate and debase the mind and alienate it from its proper objects and render it miserably indisposed to all that is good whether personal or political; they fill the body with loathsome diseases, consumption and rottenness, and scarce ever fail to cut them off in the very midst of their days. How solicitous then should parents be to keep their children as much as possible out of the way of all temptations to these vile practices, and in order to it to keep them from the very beginning steadily and industriously employed on something that may turn to good purpose, and engage them in such diversions as may tend to improve either the sagacity and virtue of their minds or the strength and activity of their bodies! And how careful ought government to be every way and by all means to discourage and severely punish these hateful vices, idleness, gaming, intemperance and lewdness, as being the most fatal

bains of virtue and public good, and utterly subversive of every thing that is dear and amiable, flourishing and happy among mankind.

VII. These, said Publicola, are indeed most necessary precautions in order to prevent the many great mischiefs incident to youth and it is a sad omen to their country that the general methods of managing them are too much the reverse of what you have been prescribing. But I hope these important suggestions will be duly attended to for the future that if possible we may at least in some measure cure the growing disorders of these degenerate times. And I humbly beg you will now proceed to prescribe the best and and properest methods, of instructing them. The sun had just begun to make his bright and radiant appearance and by degrees flaming forth above the horizon and ushering in a flood of light upon our hemisphere; before whom the twinkling stars had shrunk away and disappeared and the moving clouds just now so beautifully gilded were dissipating and vanishing; at his appearance the transparent drops of dew were glittering all around us and everything looked smiling, gay and flourishing, and being now emerged above our horizon and proceeding in his fiery strength and dazzling majesty, Raphael went on. Do you see, said he, how things are irradiated and clearly and distinctly seen and known upon the appearance of this glorious fountain of light and beauty and that it is by his light that we are enabled to make a just judgment of every visible object and direct all our external actions? What the sun is to the natural world, illuminating, enlivening and governing all things, the same is God the sovereign genius to the moral world, the knowledge of whom is therefore as necessary to direct, influence and govern our actions and conduct with regard to the moral system as the light of the sun is to direct our exertions respecting the system of nature wherewith we are surrounded. And what light is to the sensible world the same is knowledge to the intellectual world; what the one is to the eye, that the other is to the mind; as that is necessary to direct the exertions and actions of our bodies with respect to the objects of sense, so this is no less necessary to determine and regulate the affections and tempers of our minds, and the whole course of our behavior with regard to objects of the understanding and the rational world to which we stand so variously related. Your business therefore is

by all possible means of a steady assiduous application to endeavor early to beget in those young and tender minds as much knowledge as you can (particularly as just notions of God as their capacities will admit of) and to engage them to govern their actions according to them; to make them know and feel as soon as they are capable of it, that they are rational and immortal creatures made for a great variety of exertions and actions, and these to be directed and governed by reason and consideration, and that their perfection and depravity, their weal or woe, in time and to all eternity depends on their own conduct. To this purpose they are not to be treated as trifling fondlings, merely to be played with at first and then neglected as below your notice afterwards, but as creatures of some importance in the world to be nursed up and ripened with great care and diligence and the best way to teach them to exercise their reason is to converse with them as reasonable creatures and reason with them. They come into the world strangers to everything, but with an eager curiosity to know things; their curiosity is to be indulged, and their little questions should be carefully and distinctly answered. They are not to be put off with shadows and delusions, but should be plainly and easily indoctrinated with a right notion of things as being what they really are. They should not be brow-beat or cheated and imposed on but candidly, fairly and honestly dealt with, for otherwise they will be mean spirited and grovelling in their temper and notions and will be taught to lie and deceive by being themselves cheated and put off with delusions. That original honest simplicity and well-meaning so observable in them should therefore be carefully cherished and dealt with with the exactest sincerity and integrity. And as the light of the sun comes gradually upon us in the sensible world, so should knowledge be gradually let in upon their tender minds, beginning first with the small twilight, the most obvious and easy notions, and proceeding by slow degrees to a more perfect explication of things as they are able to comprehend them. This is especially necessary in religious instructions; for which reason it cannot be sufficiently wondered at that you should first begin the instruction of your youth in that long tedious dull catechism that you commonly use, which neglects some of the plainest and most obvious things in religion while it enters upon some of the deepest, most difficult and indeed the most controverted points. It might per-

haps be proper for young people of 18 or 20 years old, but to teach that and only that to children of 4 or 5 years old is very preposterous.

VIII. You object this, said Publicola, against us with a great deal of justice and I wish we could be generally persuaded to begin the instruction of our youth with some little plain easy system of religious truths. This, said the Genius, is much wanted in the country, and since nothing is of so much importance as that the tender minds of children be from the very first dawning of their understandings instructed in the most important and plainest and most obvious notions of God and religion, and since these things are above their senses, and difficult to their apprehensions, they should therefore be frequently and in the most practical manner inculcated upon their little minds. Let them therefore be early taught in the plainest and most familiar method and in a language adapted to their little capacities, — “That God made them and all things in Heaven and earth:” “That He keeps them alive every moment and provides for them everything they want:” “That He is a glorious Spirit who is present everywhere, sees and knows all things, and can do whatsoever he pleases:” “That He is kind and good, righteous true and faithful, and therefore as they are his creatures and children they must love and serve Him, and learn to be like Him, and be kind and just, true and faithful one to another and never hate and abuse one another, nor quarrel, nor lie, nor steal, etc.” “That they are obliged to these things as being his laws who is their King and Judge and will call them to an account and reward or punish them according as they are obedient or disobedient.” They should hence be made sensible of the great evil of sin, from the mischief it brings upon them, being the occasion of all the pain, trouble, sickness and death that mankind suffer, which God has justly brought upon them to punish their wickedness and bring them to repentance. “That He sent his Son into the world on purpose to instruct mankind in the true knowledge of God and their duty, to die for them and procure and offer pardon and acceptance and eternal happiness to them on condition that they believe in Him, repent of their sins, and forsake them, and return to their duty, and be faithful in it to the end of their lives, and that if they heartily endeavor to do this, He will give his Holy Spirit to enable them to reform and resist all temptations:” “That they

may be assured of all this because after Christ died for them God raised Him to life again in three days, and received Him up into heaven where He is now alive and has all power in heaven and earth and pleads with God in their behalf:" "That God has appointed Him to judge the world, and at the end of the world He will raise them to life again after they have been long dead, and then, if they have faithfully endeavored to serve God and do their duty and behave themselves well all their days, He will receive them up to Heaven to live with Him, and be perfectly happy forever, but if they go on in wicked courses, and will not be reformed He will condemn them to hell where they must be punished with terrible and amazing torments." "And finally they must be often put in mind that they are by baptism laid under obligation seriously to consider these things and to live accordingly and being thereby made God's children they must be obedient to Him as their heavenly Father, and pray to Him every day to give them grace to be faithful to their baptismal covenants, and prepare themselves to renew and ratify it from time to time in the participation of the Lord's Supper in a grateful commemoration of the death of their Savior, Jesus Christ." A little system of these and the like great truths of religion reduced into question and answer, and expressed in plain easy terms and short propositions, and directed with an immediate view at influencing their affections and practice, and frequently inculcated on their minds, from the very beginning of their capacity to apprehend them, withal frequently bespeaking their attention to them and explaining them in a variety of expressions, and illustrating them with familiar examples, could scarce fail of so engaging their attention as to have an happy influence upon the whole course of their lives; especially if, as their understanding enlarge and ripen they are kept to a constant course of reading the Holy Scriptures, and particularly the plainest most instructive and most practical parts of them, and such other small plain practical books as treat familiarly of these things. I would only add, continued he, that as quarrelling and lying are some of the first and chiefest vices that children are addicted to, there should be particular care taken to guard against them, and every instance of them should be always severely rebuked and punished, and a benevolent, honest, faithful temper and behavior should be ever particularly praised and rewarded: the one should be always treated as the most hateful

and pernicious, and the other as the most amiable and delightful thing in the world. In short, as you are industrious in teaching them a habit and facility in other arts and trades by disciplining and inuring them to the practice of them, so should you endeavor to bring them to a habit and facility in the blessed trade of a virtuous and happy life, by disciplining and inuring them to every instance of regular and virtuous practice.

IX. Alas! said Publicola, instead of this our general practice is rather to teach them to quarrel and revenge and beat one another even with vicarious blows before they are capable of any others, and to call ill reasons and cheat and deceive one another as pretty tricks, and in many other instances vice is, as it were, industriously taught them, even as soon as they can speak or go alone, by a variety of foolish and inconsiderate customs in the management of them, which are little thought of or attended to, but are really though insensibly attended with most pernicious consequences. But as the good education of children is the most necessary and important foundation of public good, I hope we shall be so wise for the future as to be in good earnest in reforming what has been amiss and observing the excellent methods you have been prescribing, which have hitherto related only to a private education. Will you please to add something in the next place with respect to the public education of youth. As to this, replied the Genius, I will observe to you first, in general, that you have been too perfunctory and superficial, hurrying them on too fast into new things, before they had well mastered what went before, and by not laying a good foundation at first it comes to pass that they get but a little smattering in those parts of learning which require the greatest application and the most steady and leisurely progress, such especially as the languages and mathematics, and so never thoroughly master any one part of them. The chief occasions of this defect are the not beginning early enough with youth in the instruction of them, and the poor management of schools and colleges, and one great occasion for this latter is the mean provision that is made for them. Now as the good education of children is one of the most important things wherein the public, as well as private weal is concerned, and certainly nothing can more deserve the care and consideration of the legislature than both that they may be honorably provided for, and faithfully managed. Unless they be honorably provided for it can-

not be expected they will be well managed; for otherwise none that are well qualified to instruct youth to the best advantage, will be concerned in it, but will look out some more profitable business, and so none but the most unskilful and unworthy persons, and such as have no other way to get a piece of bread will take this course, by this means both education will dwindle to nothing and the instruction of youth which is really in itself a noble creditable and honorable employment, and most useful and necessary to the public weal, does become one of the most mean and despicable, and by the way, what I have observed here concerning the necessity of providing honorably for those that are employed in the education of youth is of proportionably greater weight, as it concerns your ministers of religion whose business it is to teach the most divine philosophy both to young and old, and who as for the most part they are but miserably provided for, and so necessitated to neglect their studies and the business of their holy function, so both they and their office will in a little time fall into contempt and the Gospel with them, and so a door will be opened for glaring rampant infidelity, and all manner of profaneness. For God's sake therefore let the people of this country resolve to be more generous and public spirited and freely open their hearts and purses for the creditable and honorable support of their public officers both of religion and learning, which are so highly necessary for the public weal. And let him never be deemed a friend to his country, much less a patriot, who under the plausible pretense of being frugal of the public money, is stingy and narrow spirited with respect to the public good, religion and learning, on the flourishing condition of which the best interest and greatest happiness both of yourselves and your posterity do so much depend and which I here the rather mention together, because the former cannot fail of jointly and grievously suffering together with the latter. And I cannot but take notice by the way of the public injustice that not only they but all orders of people suffer in some colonies by the sinking of the value of your money. It certainly highly concerns your legislature to provide some method to retrieve it that it may not any longer bring down such a load of public guilt and mischief on the country as it has done and much more will do, to the unspeakable detriment if not utter ruin of all public good in it, unless it be reformed.

X. And now as to the right management of public education

in schools and colleges. It is in the first place necessary that there should be a careful and exact judgment made betimes of the genius and capacity of those that are to be devoted to learning, and as these is a great variety in the natural tempers, tendencies, and inclinations of youth, and a great diversity of genius, that are however each equally good in their kind, so there should be great care taken to adapt their several studies to them in such a manner as that each of them should be pleased with and indulged and forwarded in their several pursuits, and none be forced to go against the grain of nature and current of inclination because the agreeableness and pleasure of doing anything is the great incentive to make proficiency in it. And therefore as for such as are not found to have a very good capacity and strong inclination for learning, as it is doing a violence upon them to force them along through the several stages of it, so it may tend to their great injury and disadvantage in the future course of their lives; for by this means it often comes to pass that one who might have made a very handsome figure in the capacity of a husbandman, a merchant or a mechanic, has made but a very poor scholar, and a contemptible figure in the quality of a divine, a lawyer, or a physician. When once a good judgment is made of the capacity and inclinations of a youth, let him be early entered and uninterruptedly employed in the pursuit of what his genius will admit of. Many have made but a mean appearance in the world by reason of their beginning late and their many interruptions, who would have done very well had they begun in season (I mean at 6 or 7 years old) and had they steadily pursued their studies without interruption; whereas having not from the beginning been inured to great diligence and constant application they have contracted such an habit of idleness, indolence and sauntering as they never get the victory of afterwards. Let them therefore begin so soon as ever they can read well, be inured to diligence and never be interrupted; and this the rather because there ought to be a much longer course of instruction at the schools than there has usually been in this country before they are entered into the colleges. This, said Publicola, has been indeed a very gross defect in the education of our youth, that they have been generally hurried on through a school, wherein they have made but a miserable proficiency even in the very first rudiments of learning and are entered into the colleges, before they were a quarter prepared for them. It is so, said the Genius, and this has been a very great

disadvantage to learning. It would therefore be well if it were made a fixed and standing rule that none should be admitted into a college before they have spent seven years at a good school, and that the names and numbers of those authors be fixed wherein they should be competently versed, and those many more than have hitherto been ever used and indeed scarcely heard of in the generality of the schools of this country. And here let me suggest that if you would to any good purpose ripen and improve the young genius's among you, you must make business of leading them into an early and thorough acquaintance, not only with the Holy Scriptures in their original languages, wherein are inimitable beauties, but also with the other writings of the great souls of antiquity both Greek and Roman, whose works have stood the test of time, and have been always the more admired by how much the more thoroughly they have been known and the more critically examined. By this means their minds will betimes imbibe those great maxims of wisdom that have been the result of the experience of ages and of the observation of the wisest men that ever lived. Let the youth, therefore, as soon as possible be led into a thorough knowledge of the best of their histories and public speeches and their poems and moral and political writings. And to this purpose it is necessary that they should not content themselves with a slight and perfunctory knowledge of those noble ancient languages but they must be made indefatigably to labor till they have in a good measure mastered them, so as to have a taste and critical skill in them; and for this a good foundation must be laid in the schools before they enter the colleges; otherwise your colleges whose business ought to be to indoctrinate them in the sublimer parts of learning and true wisdom, will degenerate into mere schools and your men at best will be but over-grown boys. I would also add here, that it has been a great damage to learning, not only that the mathematical sciences have been too much neglected in this country, but especially that the youth have never been early enough initiated in them. They are highly useful not only for the purposes which are their proper ends and business, *viz.*, the practice and improvement of very useful arts, and the understanding of the works of Almighty God, who hath made all things in number, measure and weight, but also for the inuring of young minds, which are apt to be very desultory and unsteady to a close habit of thinking and application and to a just way of reasoning. To this

end, I would advise that some part of their time at school from the very beginning be employed in the first and most easy things of arithmetic, music, geometry, and geography, and that they improve themselves in one or other of these in course at the same time that they are learning the languages: this would very much contribute to ripen their minds, at the same time that it would prepare them to proceed with success to the sublimer parts of true philosophy, which ever suppose this apparatus. We never have had the experience of this among us, said Publicola, but I have heard it has been practiced with good success in other countries, and both an ancient Grecian and Roman (Plato in *Epinomide* and *De Republica* 1, 7. and Quint. l. 1, c. 10.) have assured us that this method was practised among the ancients. It was so, replied the Genius, and was a great means among others of rendering many of them the wonder and delight of all ages since.

XI. As to a college education, continued he, besides what I have already said of the necessity of diligence and a proper method of studies, I would add, that it is necessary in order to ripen and improve the minds of young men, that the manner of their instruction be so contrived as to make them exert their own geniuses as well as read the works of others. For exercise is as necessary to the health and perfection of the mind as of the body; as food therefore without exercise is apt to load the body with undigested and unsalutary humors, so reading without the exercise of the mind is apt to load it with a mass of crude and undigested notions without enabling it to make a just estimate and judgment of things or bring anything to perfection. It would therefore be greatly advantageous for the perfection of the minds of youth that they should be obliged to give an account of the authors they read and spend a much greater portion of their time and pains than they have been wont to do in making exercises and compositions of their own, such as orations, poems, theses, etc., and that the utmost accuracy be insisted upon in them, that their defects in style, method, argument and propriety of expression be noted, as well as in grammar, and that care be taken that they be really elaborate and their own genuine productions. And to encourage and engage them to such exercises and to an emulation to excell in them, it would be wisely ordered that a considerable premium be settled for those that succeed best. This method is highly expedient in order to inure their minds to the labor of thought which is what

they are apt to be backward to and therefore need a spur: thinking for themselves, I mean, in making compositions of their own, as they will never digest to any good purpose what they read of others so mere reading will prove but little more than only an idle amusement. As, therefore, you teach your children to walk and speak by putting them upon frequent and repeated trials of their bodily powers, so you should teach them to reason and express themselves accurately by putting them on frequent and repeated trials in the exertion of their rational powers. Moreover let great care be taken that every one do pursue such studies as are truly useful to some good purpose or other, and not spend their time in empty idle speculations. There is nothing of all that is called learning among you that is of any worth and truly deserves that name but what tends to some good practical end, either personal or public, either temporal or spiritual; by which rule if you should judge, as indeed you ought to do, there are I doubt many things that have gone under the specious name of learning, which would be retrenched and discarded. For the venerable name *philosophy*, which originally implied only the study of truth and wisdom, *i. e.*, of what tends to make men truly and completely happy, has been desecrated and prostituted to signify not only the emptiest speculations and the idlest hypotheses about nature, etc., but even mere cobwebs of unintelligible jargon, and words without any meaning, so that he has of later times been the philosopher who could dispute pro or con on any subject that should come into his head, and form contrivances out of his own brain for solving the phenomena of nature, without at all attending to nature herself; whereas anciently he was the philosopher who studied to know himself and subdue his passions, to know his God, and rightly adore Him, and to know and do the thing that is right, and promote the public good of mankind with his utmost skill and power; so that originally and truly a philosopher, a divine, a moralist, and a lawgiver were one and the same thing. Let therefore the great end of life be frequently inculcated from the very beginning of it, upon the minds of your youth, *viz.*, that they are made and sent into the world to do good and be useful in it, and that therefore as their strongest passion should be the love of religion and their country, so they should bend all their studies and endeavors to this great end of rendering themselves useful to mankind in promoting their greatest interest and weal, both

temporal and spiritual. One of the most plausible pretenses of the unthinking multitude against learning is that they find those that pretend to it not a whit the less but perhaps the more private-spirited and selfish, and they are afraid their learning will only serve to enable them with the greater art and cunning to rob and enslave themselves. And I wish they had not too many examples to justify this pretense. Now there is no way so effectual to confute it as this which I have been mentioning, *viz.*, both that those of honorable and useful stations be well provided for, and so under the less temptation, and also that they be from their very infancy instructed in the knowledge and love of public good, and made thoroughly sensible that they were not made and brought up for themselves alone, and to serve themselves of the rest of mankind, but that they might be useful members of the commonwealth, that they might be under the best advantage to do good to their fellow creatures and promote the public weal of their country, and that as this is to be the business of their whole lives, so they must devote all their studies to this great end and to qualify themselves in the best manner for it; and I would hope that if the people should experimentally find that the learned tribe were honestly and faithfully disposed to be benefactors to them, and would earnestly study to promote their welfare in all things, as they ought to do both with regard to time and eternity, they would think nothing too much that could be done to promote learning and encourage and provide for those that are bred up for public service.

XII. We had hitherto walked in the open road, and not entered the groves adjacent; but the sun now advancing and beginning to look full upon us, I proposed that we should leave the large road, and turn into the narrow path which lead into the pleasant wood to the place where I first met with the heavenly Genius; where when we were arrived we sat down under the shade on the ascent of the hill with the delicious prospect of the country and sea before us, and the sun behind us piercing the groves with his oblique rays which occasioned a beautiful mixture of light and shade among the leaves of the trees, while they seemed animated around us with the rising of a gentle breeze, when Raphael went on. And in order that your youth, said he, may be trained up in the knowledge and love of public good it is necessary not only that it be frequently men-

tioned and inculcated upon them, but that they be thoroughly indoctrinated in it, and that it be made a considerable article in their public education to have good systems of moral and political philosophy on which their instructors should read lectures to them in those noble sciences. As to this, said I, we have been very defective, and the art of criticism which should teach them the genuine beauties and excellencies of the ancient poets, orators, historians, moralists and politicians has been almost entirely neglected. (For though they have sometimes done a small matter at explaining some system of morality, yet the true grounds and foundations of morality and much less of polity have never been duly opened and explained.) Let these things then, said the Genius, which are indeed some of the noblest and most useful parts of learning be for the future particularly insisted upon as being highly useful to the public weal by leading your youth into a just and comprehensive knowledge of that wherein the true happiness and public welfare of mankind and their country consists, and inspiring them with the ardent love of it, and an earnest desire to make it the business of their lives to promote it. By this means they will be rendered the more likely to be useful to their country in public stations when they come forth to act their parts upon the stage of life. And such an education would teach them to understand the difference between the true and the false patriot or he that falsely pretends to patriotism, and is in truth a robber and betrayer of his country rather than a father to it. This man, whatever his outward appearance is and however glittering a show he makes, is truly of a most odious and hateful character. He is both center and circumference to himself, for it is self only that is at the bottom of all his public pretenses, and self alone that he still keeps in his eye in all his public views and transactions. His own private interest and advantage is the standard by which he secretly measures all his public schemes and projections, which however he plausibly gilds over with the specious pretense of zeal for the public weal, and would be thought to be solicitous for the general good while in reality it is his own single advantage that he inwardly drives at, and which he is resolved to pursue, though it be at the expense of breaking through the eternal laws of religion, righteousness and benevolence. This man being therefore thus violently attached to his own private emolument, in the pursuit of his avarice, his ambition or pleasures,

is of so narrow, contracted and abject a soul that he cannot take into his mind a general comprehensive view of the whole of things, cannot at once impartially consider them, as they stand variously related one to another and to the whole, but considers them only by detail and how they stand severally situated with regard to himself alone. On this side he has indeed a quick and sagacious eye, but is stark blind to that light wherein they ought to be considered in their consequences and with regard to the whole; the good whereof he therefore can readily sacrifice and betray when it stands in competition with what he vainly imagines to be his own advantage. Whereas on the other hand the true patriot has a more noble, generous and comprehensive view of things and keeps the whole of them at once under his eye. Self with him is considered as being what it really is, but a small and comparatively inconsiderable part with regard to the whole. And while his mind is duly disengaged with respect to himself, he is at liberty to be sensible that his own good and that of his posterity is ultimately bound up and implied in the good of the whole, and in consequence of this, he can impartially and comprehensively view things in their remote relations and consequences, and having thus the whole of them at once in his view, public as well as private, future as well as present, spiritual as well as temporal, he can without any mortification to himself readily sacrifice any private and present view that may occur, to the ultimate good, and consequently can freely despise and trample upon whatsoever may arise from this quarter when it stands in competition with the good of the whole. And with the eternal laws of truth and right which are founded on it and are above all things dear and sacred to him. He will therefore weigh everything in an equitable balance, proportioning his regard to it to its intrinsic weight and importance with respect to the common interest and happiness of the entire moral and political system. Hence he is solicitous to provide that religion, learning, public justice and safety, husbandry, merchandise, navigation and all kinds of arts and trades do flourish in proportion to the importance of them in regard to the public weal of the community, and that they be duly balanced one with the other. He is therefore constantly upon his guard and takes care to be rightly and thoroughly informed in everything that concerns the public weal, to have his attention awake and duly proportioned to the several articles wherein

it consists, and in order to this to keep his mind cool and calm and free from the perturbation of all selfish and violent passions which may tend to warp and bias it from the just and equitable consideration of every thing that lies before him, the love of his country and posterity as included in it being his strongest passion. This noble and godlike temper makes him solicitous to do the greatest good and be the most extensively useful that he possibly can. This is his greatest ambition and pleasure and the supreme joy of his soul, for it is the maxim that he has always habitually uppermost in his mind, that it is more blessed to give than to receive, to be most extensively useful in doing good to the world, than to acquire any private profit or advantage to himself. This gives him the sublimest satisfaction, as he knows that he can in nothing so much resemble the Almighty Father of the universe, as in doing good to multitudes without expecting advantage from them. This person, therefore, is truly of a most noble and amiable character, and qualified to be not only the delight of mankind, but even of God Himself, as the other is of a most mean and abject character, and abhorred both by God and man. Now to have these characters so distant from each other, the one so odious and the other so amiable, frequently represented, explained and inculcated in their true colors, and branched out into all their consequences, the one so advantageous and happy, the other so mischievous and miserable both to themselves and all around them, would be highly useful for forming the minds of youth for public service and rendering them blessings in the world.

XIII. Nothing could be more so, said Publicola, but this is the greatest difficulty to disengage men from self. It is not indeed to be expected, said the Genius, while mankind continue as they are, but that there will be a great deal of selfishness at the bottom in many of those that are concerned in public affairs. However I would hope the considerations I have been suggesting may have some tendency to cure it and certainly when everything that is dear to you is depending, it highly concerns all that are employed in public business to divest themselves of it as much as possible, and all that have any hand in promoting men to it to make as exact and unbiased a judgment as they can of those they employ, and to see that they be such as are thoroughly seen in every thing that concerns the public weal to be, as far as can be expected, disinterestedly engaged

in the promoting it. It is a great excellency of the English constitution that the people have a right to choose those who are to be concerned in giving law to them, at least so considerable a branch of the legislature that no law can be imposed on them but by the consent and approbation of those that represent them. And the several provinces of this country are constituted after the model of their mother country. Now as it is certainly a most inestimable privilege that none shall be obliged to submit to any law but what they by their representatives have an hand in making, so it most nearly concerns everyone to hold this so excellent a constitution most dear and sacred, and to be above all worldly things solicitous to preserve and maintain it and transmit it safe to your latest posterity; and consequently to make conscience of using the utmost care and caution in the choice of those that represent them, and are to transact the public affairs for them, otherwise it may come to pass that a weak and corrupt majority may establish iniquity by law. Instead of this, said Publicola, as far as I have observed there is scarce any thing that the people are generally more unthinking and inconsiderate about than this; scarce any affair about which they are more perfunctory. The genuine qualifications for public business are, I doubt, but little thought of, and interest, favor and affection which they pretend to renounce are, I fear, too generally the prevailing motives. This, replied the Genius, is the main and almost only thing that can endanger such a constitution as that of the English is, that since the greatest part of the multitude are generally the most unthinking, it is not always to be expected that they should make choice of the wisest and best men to represent them in their public affairs and transactions. Here is indeed the chief defect of it; and what human things are there that are not liable to some defect or other? However a contrary situation of things would be attended with much greater inconveniences. To remedy this defect it is necessary that those that are truly public-spirited persons and well instructed in what concerns their country's weal should take a great deal of pains to indoctrinate the bulk of the people as much as possible in the right understanding of their true public interest, to awaken their attention to it, to inspire them with an earnest concern for it, and to engage them to be solicitously watchful against all, either persons or things, that any wise tend to the subversion or damage of it. The office of a states-

man or a lawgiver, or indeed to have any hand in it, is a business of the greatest importance, and for which there are comparatively but few that are duly qualified. It requires a clear and judicious head and a calm and honest heart and consequently that those that are employed in it be thoroughly versed and well experienced in public affairs, and that they have been thoroughly tried and found to be men of true public virtue, and staunch inflexible integrity, and have a most ardent love for their country and zeal for its greatest good. Let these therefore be the things that the people have their attention fixed upon, and let them know that all that is dear to them in this world is deeply concerned in their promoting persons of these qualifications. Let them not think that their weal depends so much on the number as on the skill and integrity of those that represent them. In some of your colonies it would be well if the number was less than it is, unless the number of those that are truly qualified for so great and important a trust was greater. For the qualifications necessary to enter into the composition of a true statesman or patriot are but rarely to be found and it is a business certainly of the greatest trust that can be committed to any one. If therefore the people would truly consult their own greatest interest they must act with the greatest care and caution in this affair, for they miserably betray their dearest and most valuable privileges and turn that which is their greatest advantage and glory to the greatest mischief and shame to them, if they commit their public affairs and transactions into the hands of selfish, mean-spirited, weak or wicked men.

XIV. And in order, continued the Genius, that your public affairs may be managed to the best advantage it is highly necessary both in the choice of your public persons, and in all their public transactions when chosen and employed, that there should be the greatest care taken not to go into parties and separate interests. Unity and unanimity are the great foundation of the public prosperity which is always best secured by the disinterested joint conspiring of all orders and degrees of men to promote the common interest. As this, next to your concerns of another life, should be ever held the most sacred, dear and precious good of everyone, so if it were duly explained and constantly inculcated, it would put every one upon his guard against whatever might tend to disunite you and thereby weaken and confound you, and engage you to

militate against every temptation either from private interest or from envy, pique and resentment. Certainly it is a most heinous crime to sacrifice the good of all to the interest of one or two, and much more to the little mean enmities and animosities that may arise among you, and much more yet to the base spirit of revenge; and yet how often has it been known that private interest, envy and revenge have been the occasions of overthrowing the most potent and flourishing states and kingdoms. When therefore your country's weal is in question, let every private quarrel be overlooked and buried in perpetual oblivion, let it be banished out of your thoughts and not once suffered so much as to arise in your minds. Public debates indeed there will be as long as men, even the best of them, are such weak and short-sighted beings as they are, and are in some measure necessary in order that truth and right may be discovered by means of a thorough canvassing of both sides of the question; however that these may not suffer or be overlooked, let the greatest temper, caution, and moderation be constantly used in all your proceedings, and let everyone take care that he thoroughly understands wherein the public good of his country really consists, and that he keep this solely in his eye, and make it the alone standard by which he forms his judgment, and upon which he founds his arguments on every subject of debate that may arise. Passion and prejudice darken men's minds and bias their judgments and strangely divert them from an honest and faithful attention to the real merits of the cause; for while the mind is violently hurried on by its passions, it so strongly attends to their objects, as to be rendered incapable of attending to the whole of things, or yielding to each particular its due and equitable consideration. Nothing therefore is more inconsistent with the character of a true patriot than to be a man of violent attachments to his own schemes, or the din of a party, or to be enslaved to impetuous and ungoverned passions. Nothing is more necessary to his character than to be of a cool, calm, and impartial temper of mind and to have a thorough mastery of himself and command of his affections. For the mind that is broken with boisterous passions is like the face of the water broken and defaced with boisterous waves, in which condition it cannot represent the clear and distinct image of any object, but everything reflected from it is in the like ruffled and broken condition with itself, and itself is hurried too and fro without rule or order. Whereas on the other

hand, as the calm, smooth water is susceptible of any impression and indifferent to any objects that lie in its way, and capable of a just and exact exhibition of them without any unnatural distortions and misrepresentations, but represents them exactly as being what they are, so the calm, quiet dispassionate mind is open and indifferent to the impression of whatever objects occur to it, and at leisure to attend to them and consider them as being what they really are. Having nothing within itself to ruffle it or deface and misrepresent its objects, it considers them in their true light, and while it suffers nothing from without to discompose it or give it any untoward bias it is at liberty in all its judgments and determinations to choose and act according as the naked undisguised truth and right of the things themselves dictate and exact of it. It is upon this consideration that one of your prophets elegantly says concerning the wicked, that is those that are enslaved to their own lusts, passions and prejudices, and for the sake of indulging them sacrifice the public good and break through the eternal laws of righteousness, that they are like the troubled sea that cannot rest, whose waters cast up mire and dirt; there is no peace, saith my God, unto the wicked. This is a true and just representation of the miserable condition of wicked men in every state of life, but is more especially the case of wicked men in public capacities. They can have no just notions or apprehensions of things, nor can they make any equitable and impartial judgments of them; they can have no true peace within themselves nor can they be authors of peace and tranquility to others. Nothing but mire and dirt, that is a confused jumble of disorder and mischief in a community, as well as in their own souls, will unavoidably attend their public transactions, while covetousness, envy, malice and revenge bear sway in them and discompose their minds, warp and bias their judgments and mingle their baneful influence with all their proceedings and managements; by which means the public affairs are in perpetual embarrassments and society is filled with the utmost confusion and perplexity. Let therefore all conditions of men and especially those in public stations be severely upon their guard against all temptations from their private interest, passions and resentments, and endeavor that these be all overpowered, swallowed up and lost in that great, noble, general passion, their earnest zeal and solicitous concern for the public safety and common good of their country. But then let them withal take care that

even this be not a blind inconsiderate passion, but a calm and sedate, a considerate and well-weighed affection. Let it be as firm and steady as the sun in his course, but then let it like him be attended with the clearest light as well as the most ardent heat and be uninterruptedly and inflexibly governed by the eternal laws of wisdom and righteousness, as he is invariably governed in all his appearances and benign influences, conformably to the fixed and stated laws of universal nature. By this means will the moral and political world be no less orderly, harmonious and happy than the natural world is regular, beautiful and useful. And to carry on the similitude, pursued the Genius, as all the beauty and usefulness of the whole natural system and every part of it depends upon a steady and inflexible attendance to the most wise and in the whole most useful laws of nature; so the peace, order and prosperity of every political system, depends on the steady and inflexible obedience of every subject to the wise and wholesome political laws and constitutions of the community, and on the integrity, fidelity and impartiality of the several orders of executive powers in the execution of them, which therefore each one ought to hold as sacred, and to consider them next to the laws of heaven with the highest respect and veneration. For if laws be ever so good in themselves, yet if there be no reverence for them in the subject or no steadiness in the execution of them in the magistrate, if the one studies to elude the force and intent of them and the other connives at the disregard of them and disobedience to them, if contempt of laws and authority prevail on the one hand or negligence, bribery or corruption on the other, they soon lose their force and become despicable, and the public good is ruined, while luxury, injustice and all kinds of vice and disorder, oppression, rapine and violence take the place of public virtue, peace and order with all their blessed fruits and consequences. Let therefore everyone set this down for the constant rule of his conduct, that his duty to his country, and particularly obedience to the laws and government of it, is a duty of the greatest importance as being in the nature of things necessary to the welfare of it, and of every individual in it, and himself among the rest; and therefore that it is what he is indispensably obliged to next to his duty to almighty God, and indeed a part of it, since government is his appointment and submission to it is his well, who wills whatsoever is necessary to the happiness of his creatures; and consequently that he ought to make

conscience of a faithful submission to his country's laws and authority and nothing but his duty to God may at any time excuse him in the neglect of it. Nor will a mere scruple or surmise of an inconsistency of the one with the other excuse him, because it is evident that disobedience has a natural tendency to unhinge government and introduce disorder; this therefore ought to prevail against what is doubtful and overbalance every little scruple, so that he must have the clearest conviction arising from a most cautious, deliberate and unprejudiced examination that what his country and government requires is evidently contrary to his duty to God, otherwise his duty to God and his country lays him under an indispensable obligation to obedience to the laws and authority of it, for if men might indulge and pursue every trifling scruple that shall arise in their minds, and much more if they should contrive to make scruples about laws and indulge surmises about authority, even if they should allow themselves to propagate and aggravate them, if they should take the liberty to say and do things that tend to promote a spirit of discontent and faction: these courses can't but be attended with perpetual broils and confusion, and consequently with the most fatal and pernicious consequences, issuing in the utter ruin and dissolution of a state.

XV. The chief object, said Publicola, about which the legislature have at any time interposed, that has been attended with scruples and animosities in the people, has been that of religion; and as to this it has been much disputed whether human authority has any right at all to interpose and there have been much contention and uncharitableness and many political as well as moral mischiefs attending these religious controversies. As to this, replied the Genius, it is certain that God alone has a right to prescribe the laws of religion. He alone can determine upon what terms his creatures shall obtain acceptance with Him, so that no human authority can prescribe any doctrine to be believed or duties to be done as matters of religion which God has not prescribed. They cannot enjoin that as necessary which God has not made necessary. This does not however hinder but that as to mere circumstantial matters, confessedly such which relate purely to public order, in a worshipping community, such a community may, and indeed order in social religion makes it necessary that they do, agree upon some rules for the decent administration of that religion, which God hath enjoined upon mankind. God has prescribed all the essential matters

of religion to which nothing can be added, and from which nothing may be diminished, but as to the manner of performing its worship decently and its discipline regularly where God has left them at liberty with this general injunction only that all things be done decently and in order, they may prescribe to themselves, and this is as evident as it is that where there is no law there is no transgression, and has always been allowed and practiced by all Christians however so much they dispute it in others. It is however best they should interpose in these circumstantial matters no further than is necessary to preserve unity, discipline, and order, and when they have done so God has made it everyone's necessary duty to be obedient and thereby preserve the unity of the spirit in the bond of peace; and there ought to be no disputing and dividing about such matters and such as do cause divisions on the occasion of such things ought to be noted as walking disorderly and avoided; for what all do by their delegates, and representatives agree in, they ought all unanimously to submit to and observe, and their only care is to see to it that there is nothing enjoined on them that is manifestly inconsistent with their duty to God as is plainly laid down in the Holy Scriptures, which you must all inviolably hold to as your only rule in the pursuit of eternal happiness. God has in them given you a most excellent system of religion and morality, than which nothing could possibly be devised more adapted to make you as happy as your natures are capable of being. It prescribes the best method that can be, to procure both health of body, and tranquility of mind, both temporal peace and eternal happiness. Its rules and assistances duly attended to and made use of, cannot fail of perfecting your natures and rendering you both easy and comfortable to your selves, and useful and agreeable to others in every situation and condition of life, faithful parents and dutiful children, kind masters, honest servants, just true-hearted and friendly neighbors, upright and conscientious magistrates and dutiful and obedient subjects. In short there is no state or relation that you can imagine but that it abundantly provides for the happiness of it, perfectly tending to render you on all accounts pleasing and acceptable to God and man. It being therefore in every respect the wisest, most advantageous and beneficial system that can be conceived of, for promoting the greatest public as well as private, the greatest temporal as well as spiritual and eternal interest of mankind; as it

would be the most impolitic thing imaginable for any state to reject it, or where it is received not to countenance and maintain it, to support and encourage it, and provide for its most honorable, decent and orderly administration; so it is a most ungrateful and unhappy thing indeed that any should fall out and contend about it. How can it be that anyone that has the least tincture in his soul of so kind, benevolent and good natured a thing as Christianity is, can be tempted to go into parties, divisions and animosities on the account of it or anything that relates to it? Did men at all attend to the true inward life and spirit, the practical design and tendency of it, would it be possible for them to dispute and hate one another on account of mere circumstantial relations to the outward manner of the administration of it? And while they agree in the main essentials, the great and most important doctrines and laws of it, what a calamitous thing is it that they should suffer anything to tempt them to be sour and uncharitable towards one another on account of matters of mere speculation and some small differences of opinion in the manner of explaining it and different modes in the celebration of its public offices. It is, said Publicola, indeed a sorrowful thing that there should be so much heat and bad blood, so much distance and aversion among us on these accounts, but so the fact is, we consist of a great variety of opinions, and each one's violent attachment to his own carries us into so many separate interests that it seems almost impossible for us jointly to unite and conspire to the general good. But, said the Genius, why should it be thought impossible for you to unite upon the main essentials and some general regulations with a view at securing your general interest and the common Christianity that you all agree in, while each one freely indulges the other in their private and distinguishing opinions and modes? Methinks if you would take a little pains each one with another to promote such a temper you might fall upon some general scheme that would bring you into unity, and so far accommodate your differences, that they might not be attended with any public inconveniences. Did you but consider how solicitously the Great Mediator prayed that his disciples might be all one as He and the Father are one, that the world might be convinced of the divine original of his religion by the blessed fruits of it, and withal how fatal religious differences and separations have proved in your nation towards the introducing of infidelity, profaneness and con-

tempt of Christianity, methinks it would be scarce possible for you any longer to be so violently attached to your several distinguishing tenets, as to persist in separate and opposite communions, and uncharitable contentions. Let the time past suffice that the great enemy of God's Kingdom hath so miserably divided his subjects that he might himself enslave and rule over them. Let all unanimously conspire hereafter to oppose all temptations to persist in separations, and resolve to lay aside all party prejudices, and come into unity upon such catholic principles as shall leave no plausible pretenses for separation. I should hope at least you could all agree to make the Holy Scriptures your standard and unite upon such a form of government as is most ancient and would best answer the end of maintaining order and discipline so that no one party of Christians be a refuge to those that are the malcontents of another, whereby the discipline of each is miserably weakened and enervated.

XVI. But, said Publicola, we are so captiously disposed to dispute and quibble about every trifle that I doubt it is scarce possible for us to agree on the common principles on which we should all unite. To cure this disputatious humor, replied the Genius, let me again inculcate that every one study humility, meekness, candor, tenderness and charity. Let every one know himself, his own darkness and weakness, and then learn how much allowance it becomes him to make for others. Let the frailty of human nature be considered with great compassion and the great mischiefs both to public and private, to temporal and eternal happiness that attend religious contentions. Let the love of your common human nature, your country and Christianity strongly weigh down the scale against all your little mean party interests and affections, and let every one be deeply affected with the consideration of this, how great a crime it must and will be deemed to alienate your affections and sacrifice the public tranquility and the good of the whole to the little paltry squabbles and humors of a party. How would all private and party affections die away if these things were duly pursued in your thoughts and attended to in all their consequences? But it can not be, said Publicola, but that since the nature of things is inflexible and will be what it is whatever our apprehensions of it be, there must be a true and a false, a right and a wrong in those things about which we divide. Now what is the best rule or means whereby to make a good judgment what to choose among the many

disputed opinions? It is true, said the Genius, in many of your disputes there is a right and a wrong at the bottom, and it vastly concerns everyone to be above all things solicitous to discover the one and secure himself from the other, and industriously to guard and militate against every thing that should tend to darken and prejudice his mind; but let me tell you that in many of your disputes, the truth and the right of the case lies between you, and the disputers are each equally in the extreme; and in many others the contention is merely in words, while both sides certainly mean the same thing, and for the most part what you divide about, whether words or things, are of so small importance that it little matters on which side of the question a man is, and yet these are the matters about which you are mostly zealous, while you neglect the weighty matters wherein you cannot differ. What a lamentable thing is it that such a vast deal of that zeal is thrown away upon empty words and mere trifles, which ought to be employed about the belief and practice of those great things of religion wherein you are all agreed? It highly therefore concerns you to weigh well the importance and tendency of things as well as the truth of them, which if you did you would soon be sensible that in many cases what you contend about scarcely deserves so much notice as to be disputed much less to be the occasion of a division, and much less yet of contention and uncharitableness. However there are some things that are of considerable importance and in which as one side is in the right so the other is much in the wrong; and as to these, next to a thorough and impartial examination of the Holy Scriptures, in which you should take great care to attend to the scope and language of the sacred writers and to discharge your minds of all prejudices in favor of preconceived notions and favorite opinions and formalities of expression and peculiarities of a party, etc., and interpret the Scriptures by themselves, and not by your own private preconceived schemes, meekly submitting your private apprehensions to the plain sense of the Holy Ghost, and forming your notions by the Scriptures, and not contriving to bend, warp and torture the Scriptures (as the manner in many cases has been) to make them suit with your own preconceived opinions: I say, next to an honest and impartial study of the Scriptures, you would do well to consult the sense and practice of the first Christians, as being the properest and safest course you can take to satisfy

yourselves that you do not mistake the sense of the Holy Oracles, it being the most undoubted method of ascertaining the true sense of all laws to consult the sense of the times wherein they were given and the facts immediately consequent upon them, because it is reasonable to suppose them best understood by those who lived nearest the times wherein they were first delivered. Let therefore the study of the antiquities of Christianity be by all means cultivated and promoted among you. For as it is certain that there cannot be anything that is properly new in the Christian religion since its full and complete draught was given at first by Christ and the first teachers of it commissioned by him and inspired by his spirit, so it cannot be reasonably doubted but that it set out right at first when it made such a glorious and triumphant progress in the world, and that it was then in its greatest splendor and perfection when at the same time it was in its greatest simplicity and purity. There were then no worldly aims and views, no conceited speculations, no party contentions, nothing was then in view but eternal glory and the practice of love and peace and universal holiness as the only way that leads to it. The best course, therefore, that can be taken to recover it back to its primitive purity and glory is with an honest, humble, peaceable and teachable disposition to be thoroughly versed in the original writings of the Old and New Testaments and the histories of those times, and the earliest writers for two or three ages next after them; to begin with the Bible and read downwards in course, and observe carefully the progress of things from the beginning. It is true those ancient interpreters and defenders of Christianity were plain men and wrote in a simple, plain unaffected and unadorned manner, and therefore are not adapted to a pace that delights only in curious speculation and fine turns of wit and elegance of expression, but when they deliver the plain undisguished truth as it is in Jesus and breathe a true greatness of mind, contempt of the world, and the unaffected love and practice of every grace and virtue that constitutes the true dignity and perfection of human nature, and as they lived in daily expectation of sacrificing their lives for the cause of God and Christ, so their writings everywhere savor of the noble and heroic spirit of martyrdom, despising all the flattering allurements of a tempting, treacherous world and defying all the terrors of the bitterest persecutions and deaths and earnestly aspiring after an happy and glorious

immortality. What therefore can better contribute to the reviving of the decayed spirit of Christianity than to be familiarly conversant with those blessed persons and times?

XVII. How came it then, said Publicola, that Christianity was so soon corrupted, and what must we guard against in particular in order to reform what is amiss and to support the cause of it in its purity against the threatening mischiefs of this degenerate age? One principal cause of the corruption of Christianity, said the Genius, was worldly politics and prosperity upon the first conversion of emperors and earthly monarchs; when on the one hand the earthly powers for the sake of bringing over their subjects at once to Christianity were too much disposed on political considerations to indulge many things of their former superstition so far as could consist with their profession of the Christian religion, and on the other hand the Christians, overjoyed at the conversion of emperors and kings to the Christian faith, were by that means disposed to be too complacent to the worldly politics of those earthly monarchs. Upon this Christianity by degrees became too much blended with the former superstitions and their secular interests. Thus the Christians lately emerged out of the miseries of persecution and tasting the sweets of worldly prosperity, were tempted to run into the contrary extreme and yielded up the rights of the Christian church to too great a dependency on earthly monarchs and by degrees to a mean servile compliance with their political measures; worldly prosperity and a servile submission to worldly politics at length issued in the affectation of worldly grandeur and when the profession of Christianity became fashionable and the road to preferment, some, who were not sincere Christians making a great show of it for answering their secular ends, when they had attained them, made use of their interest with the powers of this world to model Christianity yet further so as to render it the more subservient to their political views. This laid a foundation with men of corrupt minds for making religion a mere political engine for promoting worldly ends, and when for the punishment of these enormities the eruptions and invasions of the northern barbarous nations had overspread the face of Christendom with gross ignorance and barbarity, the Pope of Rome taking the advantage of this condition of things contrived by degrees to turn the spiritual in effect into a mere worldly dominion and instead of a secular, to set up an ecclesiastical tyranny; whence have derived all those

horrid encroachments and superstitions and those most corrupt doctrines and practices, which had so far defaced Christianity that there was scarce any more than the mere name of it left. From this account of the gradual degeneracy of it, it may be observed that it is highly expedient that, though the state ought to protect and support the church and provide competently and honorably for it so that the clergy may be in a good measure at liberty from the world, that they may be wholly devoted to the business of their sacred function, yet that the church be as independent of the state as may be consistent with their constituting one community of men; for, though they are the same men who are the members of each, yet since Christ's Kingdom is not of this world, it is to be considered as being entirely a distinct thing from civil government which terminates wholly with this life and the affairs of it while the other reaches forward to the life to come, the one providing for the sensible and temporal and the other for the spiritual and eternal welfare of mankind. The distinction between them ought therefore to be so preserved and the independency of the one on the other to be so contrived and the distinct powers and interests of each so adjusted as that there may be as little temptation as possible to the officers of religion to betray its interests and rights to those of the world. And here let me observe by the way, that forasmuch as the honor and credit of religion depends very much on the qualifications, conduct and behavior of the ministers of it, as there should be the utmost care taken of their education, so it would be wisely ordered that there should be a considerable time fixed between their being graduated in the colleges and their appearing in the pulpit and that they be obliged to spend that interim in a laborious pursuit of their studies and undergo a very strict and severe examination before they be allowed to have any pretenses to the sacred function. I mention this with the greater concern because there is scarce any thing that serves to portend greater dishonor and mischief to religion in this country than the indulging raw young men and such as fall vastly short of a tolerable furniture for that service to appear in the quality of teachers and preachers of it. Let there therefore be a certain number of years fixed, and a certain measure of study and improvement settled for the interim between their finishing their education in the colleges and their being allowed to appear in a pulpit, and let them be no more suffered to think of being promoted to the honorable de-

gree and most important business of being teachers of religion, before the expiration of this term than they are of being promoted to their degrees in the colleges before the terms are expired that are fixed for those degrees, that so they may have opportunity to give sufficient proof to the world, as well of a sober, serious, mortified, devout life as of their improvements in the study and knowledge of religion.

XVIII. Another thing, continued the Genius, that I shall mention which contributed to the corruption of Christianity was the blending philosophy and science, falsely so-called, with it and affecting to model it by, or at least endeavoring to make it consist with, the metaphysical notions and ways of speaking that had obtained in the world. For some who had been philosophers before they embraced Christianity, being attached to the philosophy into which they had been indoctrinated, they were willing to bring Christianity as far as they could to speak their former sense, or at least affected to make use of their beloved philosophy to explain the Christian mysteries. Hence Christianity which was originally intended for a mere practical system for the use of the whole of mankind and not a few speculative persons only and was therefore accommodated to the low capacities of the general bulk of the peoples, instead of a plain simple rule of life became a matter of science and speculation, and instead of a principle of holy living it became a subject of empty disputing. And from disputing, men have gone to dividing and separating into different sects and parties and setting up in opposition one to another, and these uncharitable disputes and oppositions of Christians among themselves together with what I mentioned before of making Christianity a state engine, in a great measure subverted the design of it and enervated the force of it and so were the occasion of stopping the progress of it at first while the bystanding world were by this means lead to take up a wrong notion of it, and tempted to think there was nothing in it more than in other human contrivances and worldly fashions. And as these corruptions and divisions both in doctrine and in practice at first stopped the progress of Christianity, so they have of late years been the great occasions of infidelity, while wicked men of superficial thought have been willing in order to quiet themselves in their sinful courses to persuade themselves that there is nothing in it more than mere human contrivance, while they, not attending to it as being what it is in itself, have formed their

notion of it only from the empty and uncharitable disputes about it, the worldly factions that have attended it, the political use that has been made of it for answering of worldly ends, and the human corrupt, and unintelligible explications that have been made of it and imposed on the belief of Christians instead of what it really is in itself. The chief thing therefore necessary in order to prevent these fatal mischiefs, is to return back from these human explications and corruptions to the original plainness and simplicity of the Gospel and to take it not as it lies spoiled with vain philosophy, and defaced under the corrupt glosses of weak and designing men, but as it lies in the New Testament itself which should therefore be studied with the greatest humility and the utmost care and with the application of true critical skill in order to find out the genuine meaning and beauties of its language and phraseology, and its reasoning and connection, and not with the application of insignificant words and unintelligible metaphysics to bend it into an accommodation to human schemes and hypotheses. This method, said Publicola, would undoubtedly discard many unintelligible mysteries which have been received among Christians as necessary articles of faith, but are in reality only human corruptions of it. But after all, said he, there are some undeniably Scripture doctrines that would remain unaccountable to our reason; and it is one of the most plausible objections that infidels have to allege against Christianity, that it is an unreasonable thing to suppose that God should oblige us to believe things unaccountable to our reason; and this is with some who pretend to be sincere inquirers a temptation to doubt of the objects of faith. But why should they be so unreasonable, replied the Genius, as to doubt about the objects of faith on this account any more than about the objects of sense? Are they tempted to doubt about the objects of sense, suppose light, motion, etc., merely because the manner how they are affected with them is unaccountable to their reason? Does any man doubt whether he can move the limbs of his body because it is unaccountable and even unintelligible to his reason how a mere thought or act of his will should operate on the gross substance of his body, between which there seems no conceivable connection? As little reason has he to doubt of the objects of faith, supposing them to be clearly proved to be unreasonable, because his reason cannot account for the manner of them, or discover the philosophical verities on which the facts or appearances and representations of faith are founded. Was

not Alphonsus, a certain king of Aragon, a most profane man for censuring the works of God merely because he did not understand them when he said "the system of the world was a bungling contrivance and had he been of God's council he could have taught him to contrive it better." Poor weak profane mortal! He was offended, it seems, with those mysteries, the stations and retrogradations of the planets, and other evident facts and phenomena of the heavens, which are since clearly accounted for, and the greatest wisdom and contrivance there discovered to be where he, vain man! imagined to be the greatest bungling and absurdity. However though he was a profane censorer of those mysteries of nature, yet he did not doubt of the facts, being apparent objects of sense; and it is now manifest that he only discovered his own weakness, as well as wickedness in censuring what he could not comprehend in the phenomena and mysteries of nature; how much more do the unbelievers of religion discover their folly and perverseness, not only in censuring, but disbelieving the mysteries of faith because they cannot comprehend all the reasons or philosophic foundations on which those representations are grounded which God is pleased to make of himself and the unseen objects of religion.

XIX. Mysteries there are in religion, natural as well as revealed, continued he, but so there are in nature and there is nothing in the objects of faith that is in any other sense mysterious than there is in the objects of sight: *i. e.*, there are objects in both of them that you are equally unable to comprehend and explain the modus of or discover the philosophic verities on which their phenomena are founded, and which may perhaps be as remote from the appearances of things in matters of faith as the real philosophic system of the world (for instance) is from the apparent system, which though they are very diverse the one from the other, yet the appearances are in the nature of things founded on the heretofore (and to the bulk of mankind, yet) unknown real verities. Let therefore the mysteries of faith be conceived and judged of by the same measures with the mysteries of sense and then you would find the mysteriousness of the one to be no more any reason of objection against them than the mysteriousness of the other. I do not say that it is unlawful with an humble deference to the deep things of God to attempt by way of modest conjecture to account for the phenomena of faith, but then there ought to be an exact and careful distinction preserved between the phenomenon

and the conjectural explication of it, between the article of faith or fact revealed which is divine and therefore necessary to be believed, and the attempt that is made to account for it or explain the modus of it which is human, and therefore not necessary to be received. For which reason no human explications ought to be imposed as necessary, because nothing ought to be required as necessary which God hath not made so, and to impose any human explication of an article of faith as to the modus of it might prove as wrong and would be as unreasonable in spiritual things as it would in natural things to impose the doctrine of epicycles (for instance) for explaining the stations and retrogradations of the planets. Upon the whole, therefore, let everyone be upon his guard against high soaring and conceited speculations in matters of religion and using or being imposed upon by words without any meaning, against spiritual pride and conceitedness and affectation of singularity or novelty, and against hard censorious judging one another on account of matters of speculation and private opinion or differences of sentiment or expression in the explication of what all are alike obliged to believe and do. And let Christianity be received as being what it really is, *viz.*, not a system of speculations or fine precise philosophical notions given to gratify the curiosity of inquisitive men, but as a plain practical system designed alike for the whole of the human race and therefore expressed in the language accommodated to the capacities and apprehensions and fitted to the necessities and purposes of the general state and bulk of mankind; being intended to make them not curious and disputatious but sincerely religious and virtuous and practically wise and good; not to fill their heads with airy notions, but their hearts with holy and heavenly affections and their lives with sober, pure, humble, devout, pious, righteous, faithful, benevolent, and charitable behavior and actions, that they might by this means be qualified for his favor and be as happy as their natures are capable of both here and forever. And if they can be content thus to live by faith here they may hope in the life to come to be let into a clear and exact knowledge of all those deep philosophic verities upon which the present representations of faith are founded. In the meantime, since God knows that the perfection and happiness of his creatures depends on and consists in their activity or the exertion of the several powers and faculties he hath given them for attaining their several ends, his design in all the discoveries he has made

of himself to them whether in nature or revelation and all the objects he has provided for their faculties to be employed upon is to promote and direct their activity. This, I say, is the design of both these sets of mysterious objects, the objects of nature and sense being designed to employ and direct their activity and practice in the pursuit of their sensible and temporal happiness, and the objects of religion and faith to employ and direct their activity and practice in pursuit of their spiritual and eternal happiness; and he has discovered so much of both as is abundantly sufficient for these ends, though he has in both left impenetrable mysteries beyond their reach to exercise their faith and humility. As therefore with respect to natural things the honest plowman does not trouble his head about the philosophical reasons of sensible things or the manner of their operations, as for instance how the stars move or the sun and moon rise and set, but (it being sufficient for him in general that God works all in all) thankful for their light, heat and sweet influences, he diligently goes about his affairs and discharges the business of his calling that he may acquire a comfortable subsistence in the world; so with respect to spiritual things should the honest Christian not be solicitous about finding out or conceiving of the manner of God's preference and other attributes, trinity in unity, or the resurrection, etc., but being persuaded that there is with God a reason and foundation for all these things and thankful for those kind discoveries and representations, the merciful intention of them and the offers of grace, pardon and acceptance founded on them, he should earnestly and diligently set himself to the practice of the conditions and duties necessary to qualify him for an interest in these heavenly blessings. He should not scrupulously inquire, captiously dispute or anxiously distrust, but make it his business without hesitation humbly to believe and faithfully obey and thereby secure to himself the unspeakable happiness which eye hath not seen nor ear heard nor can human heart conceive, assigned for him and promised to him in consequence of his so doing.

XX. There is one thing, said I, respecting Christianity that has always been matter of difficulty with me, and that is that God has not caused it to spread further in the world, that it might be a more extensive blessing to mankind; it seems to have been designed for a benefit to the whole race and yet it is comparatively but a small part of our species that have ever been the better for it. I

am also anxious for this miserable race of mortals involved in so much calamity, darkness and weakness and have been much put to it to reconcile the present unequal distribution of things with the administration of a wise, holy and good God. In answer briefly to these objections, said the Genius, I would have you in general observe and set this down for a standing principle wherewith to silence all difficulties of this kind, that since you can demonstrate that the world as it is must have been made and be under the administration of a most wise and almighty being who must of necessity be infinitely perfect and consequently perfectly wise, just and good in all that he does, it cannot be but that he who is the judge of all the world must always do what is right and best on the whole, and that since you are but of yesterday and are confined within but a small compass of things you can survey but a little part of them and consequently are very incompetent judges of the whole and therefore must not at all wonder that there should be some untoward appearances in the conduct of the moral world as well as in the structure of the natural world (such as was the case with respect to several phenomena of the heavens before the true system of the world was discovered) ; I say you must not at all wonder that there should be some untoward appearances which you cannot account for in the one as well as the other and which therefore though they may have the appearance of evil by reason of your very partial and inadequate view of things, yet in the whole they may have the nature of good. Be it so then that in some particular scenes of providence there may appear to you nothing but intricacy, perplexity and confusion, yet in the whole vast drama there may be and from the infinite wisdom, justice and goodness of God antecedently demonstrated, it is manifest there must be the most wise and prudent management and the greatest benevolence justice and order. You may therefore always and in all cases depend upon this, that though to you clouds and darkness may be round about Him, yet justice and judgment must be the habitation of his throne ; and in the final event and result of things, you will be made sensible to your greatest surprise and satisfaction, that there was the best adjustment of things that in the whole could be, even in those scenes which you had through your shortsightedness been tempted to censure as the most inconsistent and confused. In the meantime with respect to these mysteries of providence as well as the other myster-

ies of faith you must be content to walk by faith while you are incapable of sight, being unable to see but a very little way, much less to the end of this glorious drama, this vast series of providence, and must have an implicit faith in the all-wise and most righteous and benevolent governor of the world, that all things will come out right at last. However to help you a little to conceive of things you must be sensible that as sin is the worst of evils, being in its own nature necessarily attended with the greatest mischief, it is the greatest kindness that can be done you to have the power of it subdued, that the guilt of it may be removed, and that nothing has so natural a tendency to mortify your lusts and passions and thereby subdue the power of sin as pain and trouble, and consequently that it is fit and best for you and therefore most kindly ordered that moral evil should be attended with natural evil, sin with pain and punishment, in order that it may be cured and reformed; so that all the innumerable calamities that attend the human race being designed for the punishment and cure of sin, it is really best for such a sinful race that they should be placed under such circumstances and in such a situation of things as you are in; in a word, that it is not only just but good for you to be afflicted. All that remains therefore for you to complain of is why are we permitted to be so sinful and how can sin be suffered to abound so much under the administration of a wise, holy and good God? To this then I answer that to lay his creatures under a necessity of being sinful and consequently miserable must be allowed to be inconsistent with the administration of a wise, holy and good God, but a possibility of it is in the nature of things unavoidable, supposing them (which from the frame of their nature must be supposed) to be free, self-determining creatures. Upon this head I must observe in the first place, that the greatest honor and glory of God and the greatest perfection and happiness of the rational world consists in their free and willing obedience to his most righteous and reasonable laws. Such a free obedience there could not be without a designing, self-determining power or liberty of choosing and acting for themselves, which is also the greatest natural perfection that any creature is capable of. Such a liberty or self-determining power implies in it a possibility of freely disobeying as well as obeying the laws of God, and it would indeed destroy the very being of obedience or virtue on

the one hand and of disobedience or vice on the other to suppose them necessitated; so that what is most for the honor of God and the happiness of the world, must in the nature of things imply in it the possibility of sin, notwithstanding that it tends to his greatest dishonor and their greatest misery; and what is possible may be fact even under the administration of the wisest and best of beings; all that is necessary for his vindication is to suppose, what from the absolute perfection of his nature must be supposed, namely that He can and will overrule the sins and follies of his creatures in such a manner as to bring good out of evil and secure his greatest glory and their greatest advantages in the whole and result of things. I add further that it is fit and reasonable that such free, self-determining creatures should be placed at first in a state of trial and probation, *i. e.*, under such circumstances as would give them opportunity of yielding a proof of their fidelity to their maker in spite of any temptations to the contrary and thereby of acquiring greater degrees of perfection and an higher interest in his favor. This implies that while on the one hand they have powerful motives and helps to engage them to obey they should be in the way of certain objects which without their taking due heed might be temptations to them not indeed necessitating but only alluring them to the contrary, and on this supposition the natural consequences of things, whatever the event may be, cannot reasonably be complained of. And lastly it is fit and right that an equitable consideration of things being had of the powers and advantages allowed them and the circumstances they were in, they should eventually be treated in an exact proportion according as they shall have conducted themselves, *i. e.*, that the obedient shall be rewarded and the disobedient punished. If after all you complain and say why are we made so very imperfect when other tribes of intelligent creatures are so much more perfect than we as to be much less, if at all liable to mistake and offend? It must be answered, who art thou that repliest against God? Is He not at liberty to distribute his favors as He pleases, in giving either greater or less powers or privileges, more or fewer talents and advantages as He thinks fit? So long as He has put you into a condition of being as is better than not to be at all and lays you under no necessity of being finally miserable, but leaves it possible for you to be happy in proportion to your powers and advantages, so that it will be your own fault alone if

you miscarry, and so long as He expects no more of you than in proportion to what He has given and will make you at last so much the more happy, by how much the greater disadvantages you have struggled under in the pursuit of happiness, surely you cannot reasonably complain. Why should your eye be evil because He is good? Why should you envy others their greater talents when you know that a proportionally greater account will be exacted of them? And why should you not be content with your lesser talents when you know that it is your own fault if you be not in some good degree happy, and that you will never be obliged to account for more than you have received, and that every man shall be accepted according to what he hath and not according to what he hath not. Now these considerations may serve as sufficient to account for the unequal distributions of the Gospel as well as all the other benefits of God's providence. The Gospel is indeed a great and inestimable favor; it is the greatest talent that was ever committed to mankind; but by how much the greater the talent, by so much the greater will the account be, and since those who never had it will never be accountable for it and yet by making a good use of the talents they have, acquire if not the same kind or degree of happiness with good Christians, yet at least a state that is vastly better than not to be, they cannot with any more reason complain for want of it, than a poor man that he is not born to a great estate, a weak and sickly man that he is not strong and healthy, a man of a mean capacity that he is not a great genius, a plowman or mechanic that he is not bred a scholar, or indeed a man that he is not made an angel. In matters of mere favor such as the Gospel is, it is in no wise inconsistent with God's goodness or justice that there be a variety in the distributions of his wisdom, which in all nature delights in variety, and why may there not be the like variety in the dispensations of grace as there is in the allotments of nature, since it may and must be supposed that there will be as great a variety in the future as in the present condition of mankind, in the final adjustment of rewards and punishments, as there is now in bestowments and improvements, and that all alike without respect of persons will at last be equitably treated, accepted or rejected according to what improvements they have or have not made of the talents committed to their trust?

XXI. As to the other calamities of life, said I, they may appear

tolerable in the light in which you have considered them; but that shocking, horrid, ghastly thing, *death*, it is difficult to be reconciled to it and the inconceivableness of a future state is with some a temptation to doubt of it. To this replied the Genius, but how can you reasonably complain of what you call death when you see by sad experience that even the prospect of death itself, nay and the dire threatening of endless misery after it added to all the calamities of life, is scarce sufficient and in multitudes of instances proves insufficient to answer the end of mortifying the lusts and moderating and disengaging the affections of mankind; and when every thing else fails, the apprehension of this at length is that alone which is the means of accomplishing the blessed effect, the greatest advantage of the better part; and when the prospect of the pain and death of the body proves, as it was, kindly designed, and it is your own fault if it does not prove a means of procuring the true life and happiness of the soul, which otherwise would have been in a condition infinitely worse than death, methinks you cannot be tempted to think hard of it, but should rather be thankful for this as well as all the other means designed for your greatest good. It is true there is something shocking and horrid in the appearance of it, but to good men it is no more than mere appearance. It was righteously inflicted as a punishment and curse upon your unhappy race, which having been created naturally mortal were to have secured their immortality by their obedience, but for their rebellion and apostacy they were justly banished from Paradise and the Tree of Life, means appointed for procuring immortality. However such was the mercy and goodness of God through the great Mediator who delights in bringing good out of evil and in so overruling the worst of evils as to turn them into the occasions and means of bringing about the greatest good, that He hath turned this curse into the greatest blessing, and made it a means of promoting your highest advantage, for such is the nature of things, such the frame of your constitution that you cannot long enjoy yourselves in this present state, which you are therefore to consider as only your first entrance into being, and a state of discipline and probation in order to a better state of being and a more perfect kind of life hereafter, wherein it will have been your own fault if you are not as happy as you could wish. Were death indeed at once to put final end to your beings, together with all your hopes

and expectations, it would be a subject of the most dark and gloomy reflection, but when it is to be considered not as the period of life and being, but only as the end of all sin and weakness and of all calamity and sorrow, and an entrance and introduction into a state of perfect holiness and of consummate and inconceivable joy and happiness, wherein God shall wipe away all tears from your eyes, and there shall be no more death, neither sorrow nor crying, neither shall there be any more pain; when death shall be swallowed up in victory, and the ransomed of the Lord shall return and come to the heavenly Zion with songs and everlasting joy upon their heads; when they shall obtain joy and gladness and sorrow and sighing shall forever flee away; when there shall be new heavens and a new earth wherein dwells righteousness, where you shall be his people and God Himself shall be with you, and be your God and you shall serve Him continually without weariness or reluctancy, nay with the greatest vigor, alacrity and cheerfulness; when you shall mount up with wings as eagles, you shall run and not be weary, you shall walk and not faint: I say when death is considered in this amicable and delicious light there is nothing terrible or frightful in it. It is indeed, as it is fit it should be, horrid and ghastly to the wicked as being an introduction into their final and consummate punishment which they must thank themselves for, since what thus proves to them the greatest curse might, had it not been their own fault, have been the greatest blessing. Do you therefore only take care faithfully to serve and please your Maker and Redeemer and you will then have nothing to fear from it. It is true you cannot justly conceive of the state you shall be in after death, but why should this be any temptation to you to doubt of it since there are ten thousand things, that you cannot conceive the manner of, which yet you are obliged to acknowledge to be certain facts. You cannot conceive how you came into your present state or subsist in it, but you find yourselves in being and surrounded with infinite tokens of the universal presence, beneficence, infinite wisdom and almighty power of God, and why can you not then implicitly confide in the same omniscience, omnipotence, and boundless benevolence that you now experience to subsist and provide for your future state of being? Who that had never seen anything but the frost and cold and universal death of a terrible and ghastly winter, could conceive anything of the kindly warmth, the universal life, the surprising beauties and exquisite

productions of a fine spring. Yet if he could discover many strong arguments to prove the probability of these things by undoubted reasoning, and is moreover ascertained of the truth of them by one who demonstrably cannot lie, what could tempt him to doubt of them? You may however be a little assisted to form some glimmering notion of this future state of being by this obvious reflection: you can easily conceive of a man born blind and deaf, who at the same time has the senses of feeling, tasting and smelling to perfection; now to this man the tangible world with the various objects of taste and smell are all the world that he has or is capable of having any notion or conception of, any more than you are capable of conceiving of that future world, the state of your existence hereafter, which eye hath not seen nor ear heard nor hath it entered into the heart of man to conceive. You, who have the visible world about you and the perception of great varieties of sounds, are to this man what you may suppose angels and other disembodied spirits are to you, and he can no more conceive of the visible and audible world that you converse in, than you can of the spiritual world above you or the future state of your existence. Do but conceive this man to be at once deprived of the senses of feeling, tasting, and smelling, and you must be sensible that he is dead, totally dead to all the world that he ever had any knowledge of, and then imagine him to have his eyes and ears opened, to have a numerous set of beautiful visible objects, light and colors with their infinitely various modifications, and the like endless various modifications of pleasing and harmonious sounds, and you must needs conceive him to have an entirely new world open upon him to which he was before an utter stranger. He is indeed dead to the dark tangible world, but he has exchanged it for another, being got into the beautiful new visible world to which he is alive to a vastly better purpose of enjoying himself than he was before. Now this change is very conceivable to you, but is not greater than you can imagine what you call death to be; nay you need not suppose death so great a change, because you may conceive some of your senses, such as seeing and hearing, common both to your present and future state, and these as well as your understandings and memories you may imagine capable of being advanced to a vastly greater perfection. Your sight, for instance, may be so contrived as to fit itself at pleasure to its objects, whether vastly distant or extremely minute, so

as to ken the most distant objects as well as the nearest and the minutest as well as the largest. I say such improvements as these you can easily form a notion of. Furthermore (to add another resemblance) you see a multitude of despicable worms that crawl on the earth confined to a slow motion and low grovelling sensations and exertions, which by a wonderful transmigration after a short period of seeming death become beautiful winged animals and at liberty to waft themselves through the air whithersoever they please and enjoy pleasures they were before incapable of; now is it not easy for you to conceive these creatures, as in truth they are, to be lively and apposite emblems of your own case? You are here confined like them to a little compass of ground and a few slow motions, feeble exertions and grovelling sensations, but if you have acted your parts well in this state, in proportion to the powers and advantages you now enjoy, you shall after your seeming death (for it is no more) pass into a new and glorious state compared with which your present life is but little more than death and your present enjoyments little better than a mere dream wherein, being freed from these gross animal bodies now prisons of flesh and blood, from your present limitations and confinements together with all your pains and infirmities, and, which is a yet vastly greater advantage, from all your sins and temptations, having your present noblest powers vastly perfected and being endued with others of inconceivably greater perfection added to them, and [.] pure, light, ethereal vehicles, bright and beautiful forms, you shall be at liberty to shift the scene at pleasure, and waft yourselves whithersoever you please through the vast fields of ether, and enjoy unspeakable pleasure in the contemplation of God's wondrous works both in nature, providence and grace, and in the free and unreluctant obedience to all his laws and the everlasting participation of his love and likeness. These, my friends, are reflections worthy of the dignity of your rational and immortal nature; this is an happiness worth your utmost struggles and labors and severest self-denials and mortifications in the pursuit of it. Did you understand what it is to be an angel one hour you would look down on your present state with contempt and pity, you would despise and trample on this world with all its pleasures and allurements, you would bid defiance to all its frowns, its threats and calamities, and you would meet death not with fear and anxieties but with longing

curiosity, with joyous hopes and pleasing expectations as what would usher you into a glorious immortality of inconceivable bliss and happiness. But the morning is far spent and it is time to break off these conversations and betake yourselves to the business of your callings. I hope you will make the best use you can of what I have suggested for the benefitting of yourselves and your fellow creatures. Go your way and spend the rest of your days in doing all the good you can for the public weal of your country and the interest of true religion and expect with patience and perseverance your lot and portion with the blessed people above where you shall enjoy an happiness vastly larger than your utmost wishes and as lasting as your immortal souls. We then with the lowest reverence humbly took our leave with the most grateful resentments of the honor and favor done us and the most zealous resolutions to make use of the instruction that had been given us in doing all the good in our power, and so we turned to the affairs of life and the business of our several callings.

PART XII

REFLECTIONS ON OLD AGE AND DEATH

There is no date on this manuscript. Samuel Johnson prefaces it with the following explanation: "Added to Osian's Address to the Sun, which concludes with Reflections on Old Age and Death, as the result of all true Philosophy."

On the reverse of the sheet Samuel Johnson added: "As for me, O my God, my continuance here can be but short. I must soon put off this earthly tabernacle."

[The Editors.]

REFLECTIONS ON OLD AGE AND DEATH

But it is only this decaying body that can fade and die: my soul which only is myself shall continue to live, to think and act, and flourish in immortal youth. It shall, if qualified, forever dwell in unfading bliss, with the universal Father of spirits, who are his whole family of heaven and earth; with whom it shall forever drink of the river of his pleasure.

O Thou Eternal Being, the Ancient of Days, who hast always existed before all ages, and thy years shall never have an end!—O Thou Almighty Being, the Great Genius of the World, by whom all things exist, and without whom nothing could ever have been at all!—It is on the free exertion of Thy omniscient will and power that all things depend; and Thou art the great source of all being, perfection and happiness!

Thou, like the sun to this world of bodies, art the glorious sun of the world of spirits; the light and life of every created intelligence; the light that can never be extinguished; the life that can never die!

Thee will I ever devoutly acknowledge, love, revere and adore:—To Thee will I cheerfully resign; in Thee I can never cease to confide; who art everywhere present; whose goodness is boundless; whose wisdom is infinite, and whose power is uncontrollable.

Let my whole soul be entirely devoted to Thee, and freely conformed to Thy purity, rectitude, truth and goodness; that I may never cease to be happy, both in Thee, my God, and in myself and others, rejoicing together with them in the ever-flowing streams of Thy inexhaustible benevolence!

Quod faxit DEUS, Pater O. M. mediante Jesu Christo et renovante Spiritu Sancto; cui JEHOVAE aeterno, Uno, Trino, omnii tribuatur, laus, Honor et Gloria, in secula seculorum. Amen.

WITHDRAWN



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